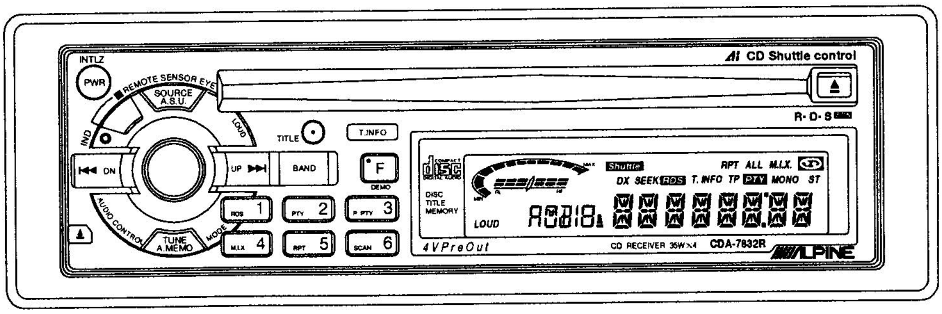
ALPINE

SERVICE MANUAL

FM/MW/LW/RDS Compact Disc Receiver

COMPACT
disc
DIGITAL AUDIO

- For the CD player mechanism parts (DP24L010) of this model, refer to the Service Manual • DP-L Series (Part No. 68E23246S01).



INTLZ
PWR
REMOTE SENSOR EYE
SOURCE A.S.U.
IND
LOUD
TITLE
T.INFO
ON
UP
BAND
F
DEMO
AUDIO CONTROL
TUNE A.MEMO
MODE
RDS 1
PTY 2
P.PTY 3
M.I.X 4
RPT 5
SCAN 6
AI CD Shuttle control
R·D·S
DISC
TITLE
MEMORY
LOUD
MAX
Shuttle
RPT ALL M.I.X.
DX SEEK RDS T.INFO TP PTY MONO ST
4VPreOut
CD RECEIVER 35W×4
CDA-7832R
ALPINE

● CDA-7832R

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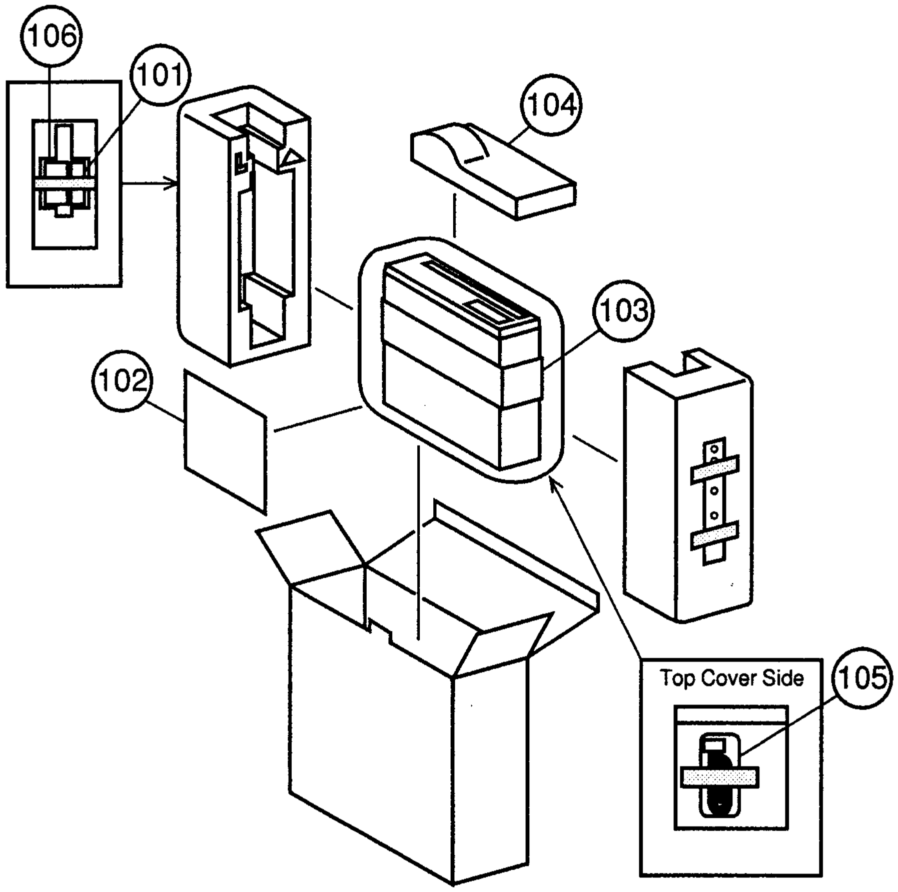
Packing Assembly Parts List

Symbol No.	Part No.	Description
101-1	60S70585F01	Battery, Lit. 3V (CR2025)
101-2	03S72235F13	Screw, Countersink (M5X8)
101-3	46A42363F01	Stud, Bolt
101-4	36A11113W01	Cap, Rubber (A)
101-5	03A11112W01	Bolt, Hex. (M5) (A)
101-6	01T75363W01	ISO/JASO Antenna Adapter
102-1	68P81384W46	Owner's Manual
102-2	68P81384W48	Owner's Manual (I/G/S)
103	15D50406W01	Case, Inner
104	15D60773W01	Carrying, Case
105	01T85297W01	Assy., ISO Wire
106	01T75235W05	Assy., Card Remocon

Symbol No.	Part No.	Description

Packing Method View



Specifications

CD SECTION

System	Optical (Compact Disc system)
Quantizing Bit Number	16bit Linear system
Channels	2 Channels
Channel Balance (1kHz)	0±3dB
Distortion (1kHz)	0.1%
Frequency Response (Ref.1kHz)	17Hz : 0±3dB
	127Hz : 0±2dB
	10.007kHz : 0±2dB
	19.997kHz : 0±4dB
S/N Ratio (1kHz)	85dB
Separation (1kHz)	55dB
De-Emphasis (Ref. 1kHz)	4kHz : -20±3dB
	16kHz : -20±3dB

FM RADIO

Intermediate Frequency	10.7±0.1MHz
Frequency Range	87.5~108MHz
Usable Sensitivity (Mono, 30dB S/N, at 98.1MHz)	17.2dBf
-3dB Limiting Sensitivity (at 98.1MHz)	19.2dBf
S/N Ratio (Stereo, at 98.1MHz)	56dB
Image Rejection (at 106.1MHz)	40dB
IF Rejection (at 90.1MHz)	60dB
Distortion (Input 60dB μ, at 98.1MHz)	1%
Frequency Response (Ref. 400Hz, at 98.1MHz)	100Hz : 0 ±3dB
	10kHz : -12 ±3dB
Stereo Separation (1kHz, at 98.1MHz)	20dB
Residual Noise (Ref. 400Hz, at 98.1MHz)	25 ±5dB

MW RADIO

Intermediate Frequency	450kHz
Frequency Range	531 ~1,602kHz
Usable Sensitivity (20dB S/N, at 999kHz)	36dB
S/N Ratio (at 999kHz)	44dB
Image Rejection (at 1,404kHz)	50dB
IF Rejection (at 603kHz)	60dB
Distortion (at 999kHz)	1.5%
Frequency Response (Ref. 400Hz, at 999kHz)	100Hz : -3 ±4dB
	4kHz : -12+6, -12dB

LW RADIO

Intermediate Frequency	450kHz
Frequency Range	153～281kHz
Usable Sensitivity (20dB S/N, at 216kHz)	41dB
S/N Ratio (at 216kHz)	42dB
Image Rejection (at 270kHz)	40dB
IF Rejection (at 162kHz)	50dB
Distortion (at 216kHz)	2%
Frequency Response (Ref. 400Hz, at 216kHz)	100Hz : -3 ±4dB 4kHz : -12+6, -12dB

GENERAL

Power Supply	DC14.4V
Power Output (10% T.H.D.)/Impedance	16W/ch/4ohm
Pre-Output Voltage/Impedance	2.7V/10kohm
Semiconductors	35IC's, 66Transistors, 22Diodes, 7Zener Diodes
Dimensions (W×H×D)	Nose : 177×46×17.5mm Chassis : 178×50×152mm
Weight	1.7kg

NOTE : Due to Continuing product improvement, specifications and designs are subject to change without notice.

Servo Monitor (Part No. 01E20845S01)

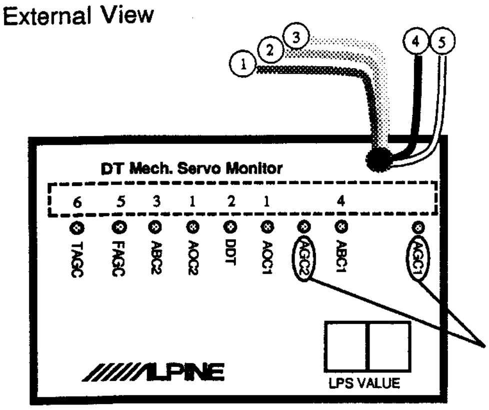
I. Purpose

DP-L mechanism built-in CDA-7832R performs digital signal processing in the inside of Digital Servo LSI and the outside alignment circuit builds in to this LSI and each alignments are automatic.

This DT Mechanism Servo Monitor is a jig for the automatic alignment circuitry.
Please refer to the following list for the reference;

1. LED indicates the alignment.
2. Diagnosis of automatic alignment.
3. LED indicates a failure item for easy failure analysis of servo circuitry.

External View

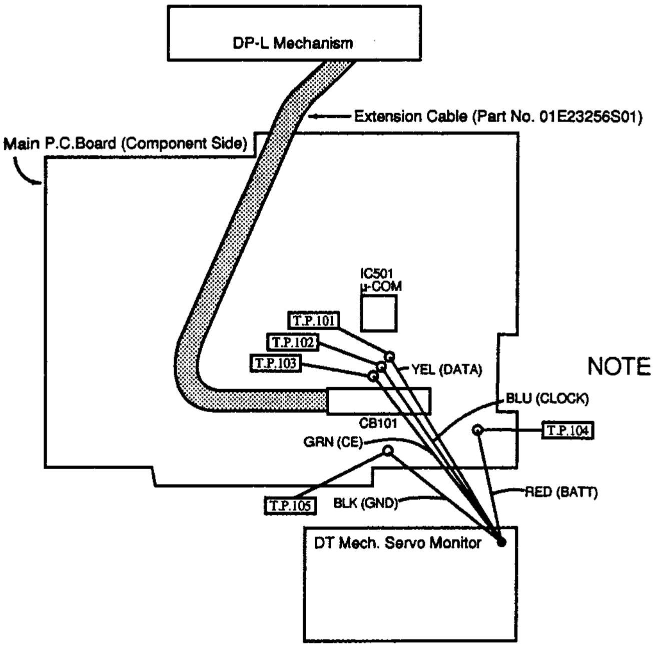

①
②
③
④
⑤
DT Mech. Servo Monitor
6 5 3 1 2 1 4
TAGC
FAGC
ABC2
AOC2
DDT
AOC1
AGC2
ABC1
AGC1
LPS VALUE

	①	②	③	④	⑤
Wire Color	Yellow	Green	Blue	Black	Red
Name	Data	CE	Clock	Ground	Battery

※ For this digital servo LSI, no adjustment was made.

* The numbers of the automatic alignment sequence.

II. Connection Points and Connection Method


DP-L Mechanism
Extension Cable (Part No. 01E23256S01)
Main P.C.Board (Component Side)
IC501
μ-COM
T.P.101
T.P.102
T.P.103
YEL (DATA)
BLU (CLOCK)
CB101
T.P.104
GRN (CE)
RED (BATT)
T.P.105
BLK (GND)
DT Mech. Servo Monitor

NOTE : For the Test Points (T.P.101~105), refer to the Parts Layout on P.C.Boards and Wiring Diagram.

Connect each of the wires to the Test point as illustrated in the diagram.

* Be very careful not to shorts the test points since they are located close together.

* DT Mechanism Servo Monitor can be used for the DP-L mechanism.

III. Operating Specifications

The automatic adjustment operations of the CDA-7832R are performed by output of the commands of the various adjustment items from the main microprocessor. Adjustments are performed in response to these commands by the digital servo LSI. This servo monitor jig receives the signal returned to the main microprocessor from the digital servo LSI and causes the LED to light or go off. The adjustment condition (of either completed or not yet completed) of the various adjustment items can be checked using the lighting condition of this LED. The following test discs are required for the good/fault judgment:

1. A-BEX TCD-721 (6th track - 1.2mm) : Scratch test disc
2. A-BEX TCD-782 : Signal test disc

Measures to be Taken Corresponding to the LED Indication

1. When a LED other than FAGC or TAGC lights, perform the fault causation analysis using the fault diagnosis chart according to the LED indication.

i) LED indications

Lit : Fault   Unlit : OK

Adjustment Order	LED Name	Adjustment Order	Contents
1	AOC2	Tracking offset adjustment	Corrects the tracking error value as an offset.
	AOC1	Focus offset adjustment	Corrects the focus error value as an offset.
2	DDT	Disc detection	Detects the presence or absence of a disc.
3	ABC2	Tracking balance adjustment	Corrects the average value of the tracking error as a balance value.
4	ABC1	Focus balance adjustment	Correct until the RF level becomes maximum.
5	FAGC	Focus fine gain adjustment	Introduces external interference and adjusts the focus gain to an appropriate value.
6	TAGC	Tracking fine gain adjustment	Introduces external interference and adjusts the tracking gain to an appropriate value.

ii) Seven-Segment LED (LPS Value)

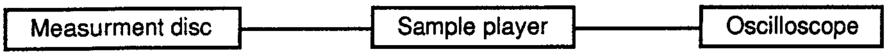
Not used since this model is a single CD player. Indication shows "00".

Measurements

A. RF Signal Level Measurement

The main beam of the returning light is received by the photodiode and the output voltage is obtained by current-voltage conversion of A+B+C+D.

1. Block Diagram



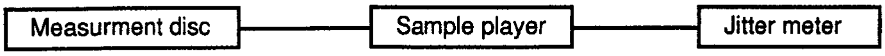
2. Measurement Method

(a). Connect the ground terminal of the oscilloscope VRO (TA2066F (IC1102), pin 20) and measure the RFO signal (of TA2066F (IC1102), pin 21).
(b). Play the first track of the measurement disc A-BEX TCD-782.
(c). Read the peak-to-peak value of the waveform.
Specification: 1.2+0.3, -0.2V
* When the value is outside of the specification (i.e., not good), check TA2066F (IC1102) and the pick-up.

B. Jitter Measurement

The standard deviation of the pulse width when a trigger is applied to the rising edge of the 3T component of the RF signal.

1. Block Diagram



2. Measurement Method

(a). Connect the ground terminal of the jitter meter to VRO (TA2066F (IC1102), pin 20) and measure the RFO signal (of TA2066F (IC1102), pin 21).
(b). Play the first track of the measurement disc A-BEX TCD-782.
(c). Read the indicated value of the jitter meter.
Specification: 25nS or less
* When the value is outside of the specification, check TA2066F (IC1102) and the pick-up.

C. Focus Servo Gain Measurement

Measure the focus servo open loop gain in the servo-on (closed loop) condition.

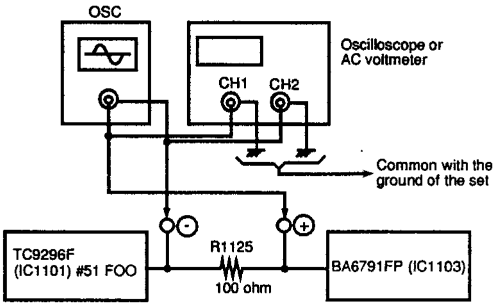
1. Block Diagram

Measurment disc — Sample player — Oscillator and oscilloscope

2. Measurement Method using an Oscillator and an Oscilloscope

(a). Connect OSC output to resistor for gain measurement (100 ohm).
(Connect a servo driver side to positive side.)
(b). Connect CH1 of oscilloscope to a servo driver side of resistor for gain measurement (100 ohm).
(Connect negative side with GND of set.)
(c). Connect CH2 of oscilloscope to TC9296F (IC1101) side of resistor for gain measurement (100 ohm).
(Connect negative side with GND of set.)
(d). Play back the eighth track of A-BEX TCD-782 disc for measurement. (No sound recording track)
(e). Output frequency (1.2 kHz, 200 mVP-P) from OSC and compare the amplitude of CH1 and CH2 of oscilloscope and convert into dB.
Gain (dB) =20 Log (CH2/CH1)
Specification : Gain Normal if it is within 0±3dB.
* If the specificaiton is out (NG), TC9296F (IC1101) (Digital Servo LSI) is malfunction.
NOTE: AC voltmeter is available to measurement.

3. Connection (Example)


OSC
Oscilloscope or AC voltmeter
CH1
CH2
Common with the ground of the set
⊖
⊕
TC9296F (IC1101) #51 FOO
R1125
100 ohm
BA6791FP (IC1103)

* FOO: Focus drive output

D. Tracking Servo Gain Measurement

Measure the tracking servo open loop gain in the servo-on (closed loop) condition.

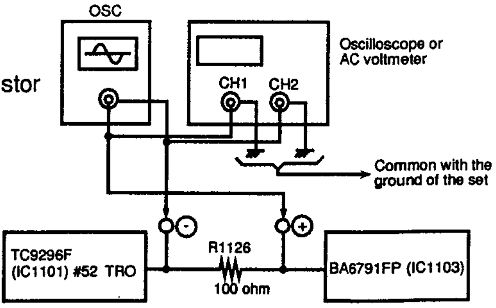
1. Block Diagram

Measurment disc — Sample player — Oscillator and oscilloscope

2. Measurement Method using an Oscilloscope

(a). Connect OSC output to resistor for gain measurement (100 ohm).
(Connect a servo driver side to positive side.)
(b). Connect CH1 of oscilloscope to a servo driver side of resistor for gain measurement (100 ohm).
(Connect negative side with GND of set.)
(c). Connect CH2 of oscilloscope to TC9296F (IC1101) side of resistor for gain measurement (100 ohm).
(d). Play back the eighth track of A-BEX TCD-782 disc for measurement. (No sound recording track)
(e). Output frequency (1 kHz, 50 mVP-P) from OSC and compare the amplitude of CH1 and CH2 of oscilloscope and convert into dB.
Gain (dB) =20 Log (CH2/CH1)
Specification : Gain Normal if it is within 0±3dB.
* If the specificaiton is out (NG), TC9296F (IC1101) (Digital Servo LSI) is malfunction.
NOTE: AC voltmeter is available to measurement.

3. Connection (Example)

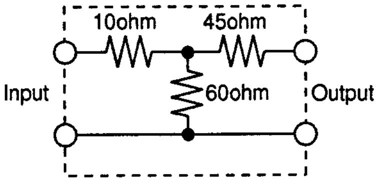

OSC
Oscilloscope or AC voltmeter
CH1
CH2
Common with the ground of the set
⊖
⊕
TC9296F (IC1101) #52 TRO
R1126
100 ohm
BA6791FP (IC1103)

* TRO: Tracking drive output

Adjustment Procedures

1. FM SECTION

(1) Dummy Antenna Circuit


10ohm
45ohm
Input
60ohm
Output

For 50 ohm FM Signal Generator

Figure 1

(2) Connections

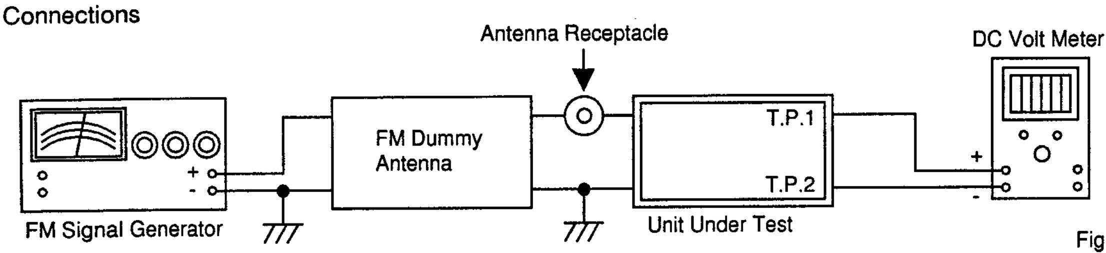

Antenna Receptacle
DC Volt Meter
FM Dummy Antenna
T.P.1
T.P.2
+
-
FM Signal Generator
Unit Under Test

Figure 2

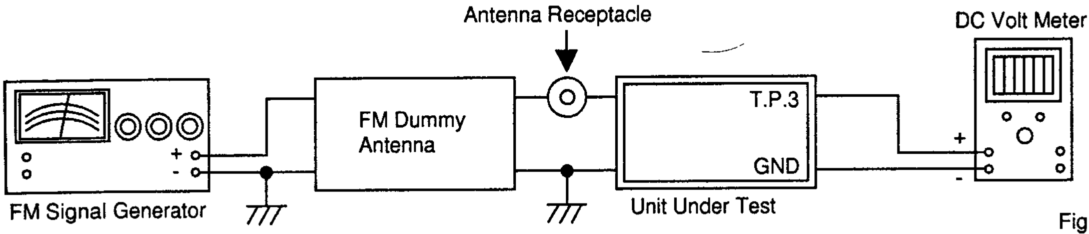

Antenna Receptacle
DC Volt Meter
FM Dummy Antenna
T.P.3
GND
+
-
FM Signal Generator
Unit Under Test

Figure 3

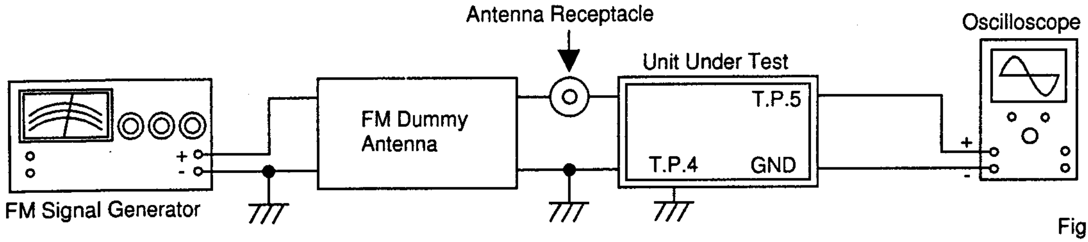

Antenna Receptacle
Oscilloscope
Unit Under Test
FM Dummy Antenna
T.P.5
T.P.4
GND
+
-
FM Signal Generator

Figure 4

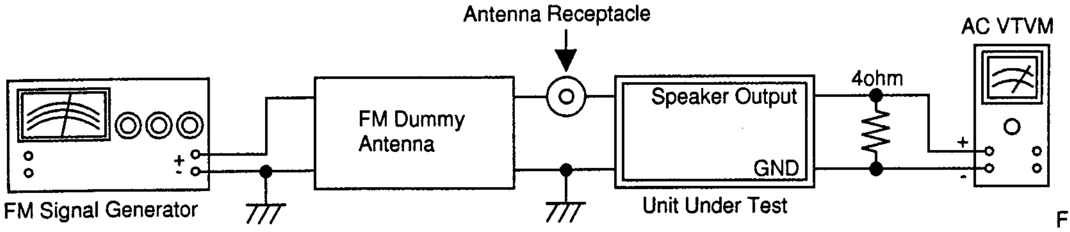

Antenna Receptacle
AC VTVM
FM Dummy Antenna
Speaker Output
GND
4ohm
+
-
FM Signal Generator
Unit Under Test

Figure 5

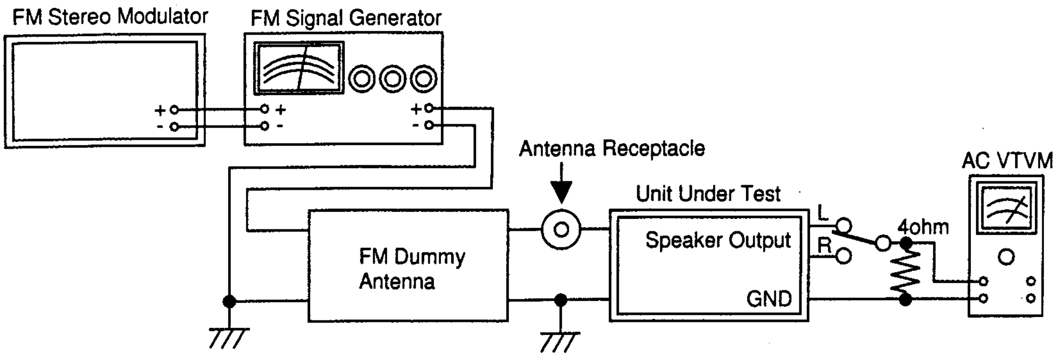
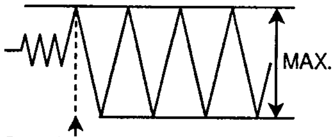

FM Stereo Modulator
FM Signal Generator
+
-
Antenna Receptacle
AC VTVM
Unit Under Test
FM Dummy Antenna
Speaker Output
GND
L
R
4ohm

Figure 6

(3) Control Settings

Power Switch .... ON
Fader Control .... Center Position
Balance Control .... Center Position
Treble / Buss Control.................................Center Position
Band Switch .... FM
Others .... OFF

(4) Adjustment Procedures

Step	Description		Connection	Signal Generator	Dial Control	Test Point	Adjustment
1	IF Adjustment		Figure 2	98.1MHz, 72dB (Mod. OFF)	98.1MHz	T.P.1 T.P.2	Adjust L2101 to 0 ±15mV.
2	Signal Meter Adjustment		Figure 3	98.1MHz, 46dB (Mod. 400Hz, Dev. 40kHz)	98.1MHz	T.P.3	Adjust VR2101 to 3.5 ±0.1V
3	Seek Stop Adjustment		Figure 4	98.1MHz, 30dB (Mod. OFF)	98.1MHz	T.P.4 T.P.5	Adjust VR2104 for the waveform changing to maximum output. Figure : Waveform of T.P.5 output.  Stop the adjust VR2104 at this time.
4	Noise Level Adjustment	(1)	Figure 5	98.1MHz, 72dB (Mod. 400Hz, Dev. 40kHz)	98.1MHz	Speaker Output	Adjust MAIN VOLUME (VR402) to obtain 2V output. This value is 0dB.
		(2)	Figure 5	98.1MH, -19dB (Mod. 400Hz, Dev. 40kHz)	98.1MHz	Speaker Output	Adjust VR2105 to -25 ±3dB output at SG level minimum.
5	Stereo Blend Adjustment (Lch)		Figure 6	98.1MHz, 40dB (Mod. 1kHz, Dev. 36kHz, Stereo, Lch Only)	98.1MHz	Speaker Output	Adjust VR2102 for Lch and Rch output level difference to be 8 ±2dB.
6	Stereo Separation Adjustment (Lch)		Figure 6	98.1MHz, 72dB (Mod. 1kHz, Dev. 36kHz, Stereo, Lch Only)	98.1MHz	Speaker Output	Adjust VR2103 for Rch output to be minimum, and confirm Lch and Rch output level difference is more than 20dB.
7	Stereo Blend Adjustment (Rch)		Figure 6	98.1MHz, 40dB (Mod. 1kHz, Dev. 36kHz, Stereo, Rch Only)	98.1MHz	Speaker Output	Proceed same adjustment under step 5.
8	Stereo Separation Adjustment (Rch)		Figure 6	98.1MHz, 72dB (Mod. 1kHz, Dev. 36kHz, Stereo, Rch Only)	98.1MHz	Speaker Output	Proceed same adjustment under step 6 by alternating Lch and Rch.

Adjustment Locations

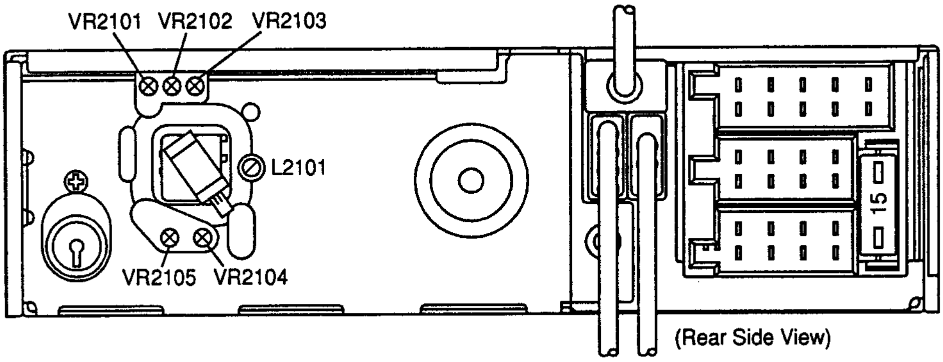

VR2101
VR2102
VR2103
L2101
VR2105
VR2104
15
(Rear Side View)

Figure 8

Note : For the Adjustment parts (VR402) and Test Points,
refer to the Parts Layout on P.C.Boards and Wiring Diagram.

Description of IC Terminal

75099W38 : IC501

No.	Symbol	I/O	Terminal Description
1	GND	—	GND connection terminal.
2	ENCODER 1	I	Encoder 1 input terminal.
3	ENCODER 2	I	Encoder 2 input terminal.
4	GND	—	GND connection terminal.
5	PULL UP	—	Pull up terminal.
6	NC	—	No connection terminal.
7	V_{DD}	—	Power supply terminal.
8	DTS STS	I	Serial Data input terminal from DTS µ-COM.
9	DTS CMD	O	Serial Data output terminal to DTS µ-COM.
10	DTS CLK	O	Serial Data output terminal to DTS µ-COM.
11	LCD DO	I	Serial Data input terminal from LCD Driver.
12	LCD DI	O	Serial Data output terminal to LCD Driver.
13	LCD CL	O	Serial Clock output terminal to LCD Driver.
14	LCD CE	O	CE signal ouptut terminal to LCD Driver.
15	$\overline{\text{LCD RST}}$	O	Reset signal output terminal to LCD Driver.
16	CD CE	O	Latch output terminal for CD Auto adjustment monitor.
17	CD CLOCK	O	Clock output terminal for CD Auto adjustment monitor.
18	CD DATA	O	Data output terminal for CD Auto adjustment monitor.
19	NFP EV DATA	O	Serial Data output terminal to Electrical Volume (NFP).
20	NFP EV CE	O	CE signal output terminal to Electrical Volume (NFP).
21	EV DATA	O	Serial Data output terminal to Electrical Volume.
22	EV CLK	O	Serial Clock output terminal to Electrical Volume.
23	L-CONT	O	Power control signal output terminal for Disc detection.
24	NFP 1	O	Fader control output terminal at NFP.
25	LOAD FWD	O	Loading Motor FWD driving control output terminal.
26	LOAD BWD	O	Loading Motor BWD driving control output terminal.
27	NFP 2	O	Fader control output terminal at NFP.
28	SW-D	I	Disc chucking position detection signal input terminal.
29	SW-C	I	Eject end detection signal input terminal.
30	GND	—	GND connection terminal.
31	BAT DET.	I	Digital Servo IC voltage detection signal input terminal.
32	V-CONT	O	CD power supply control terminal.
33	GND	—	GND connection terminal.
34	LIMIT-SW	I	Limit detection signal input terminal.
35	LSI-RST	O	Reset signal output terminal to Digital Servo IC.
36	BUS-0	I/O	Command Data input/output terminal to CD Signal Processor.
37	BUS-1		
38	BUS-2		
39	BUS-3		

No.	Symbol	I/O	Terminal Description
40	BUS CK	O	Command Data output terminal to CD Signal Processor.
41	CCE	O	Command Data output terminal to CD Signal Processor.
42	LOCK	I	Lock Status input terminal.
43	MUTE	O	Audio Mute signal output terminal. (H : MUTE ON)
44	NC	—	No connection terminal.
45	DTS MUTE	I	Mute signal input terminal from DTS µ-COM.
46	BUZZER	O	Guide Tone Buzzer output terminal.
47	NC	—	No connection terminal.
48	NC	—	No connection terminal.
49	DTS STRT	O	Communication sync. signal output terminal to DTS µ-COM.
50	ALARM	O	TP-OFF ALARM signal output terminal.
51	DTS CE	O	CE signal output terminal to DTS µ-COM.
52	TUNER ON	O	Tuner power control signal output terminal. (H : TUNER ON)
53	LCD ON	O	LCD Back Lighting power control signal output terminal.
54	NOSE PWR	O	LCD Driver power control signal outpupt terminal.
55	POWER ON	O	Audio and Key Lighting power control signal output terminal.
56	PWR IC ON	O	Power IC stand-by control signal output terminal.
57	NC	—	No connection terminal.
58	Ai-DIN $\overline{\text{IN}}$/OUT	I	Set up detection terminal for input/output of Ai-NET DIN. (H : OUTPUT)
59	IN-INT	I	In Interrupt signal input terminal. (H : Active)
60	$\overline{\text{RESET}}$	I	System Reset signal input terminal.
61	REMOCON	I	Remocon Data signal input terminal.
62	B-HOLD	I	Battery (4.3V) detection signal input terminal.
63	A-HOLD	I	ACC detection signal input terminal.
64	BUS-IN	I	Ai-NET BUS Data input terminal.
65	SW-A	I	Disc insertion deteciton signal input terminal (1).
66	BUS-OUT	O	Ai-NET BUS Data output terminal.
67	SW-B	I	Disc insertion detection signal input terminal (2).
68	V_{DD}	—	Power supply terminal.
69	X2	O	System Clock OSC output terminal. (4.19MHz)
70	X1	I	System Clock OSC input terminal. (4.19MHz)
71	GND	—	GND connection terminal.
72	NC	—	No connection terminal.
73	GND	—	GND connection terminal.
74	AV_{DD}	—	Analog power supply terminal to A/D converter.
75	AV_{REF}	I	Reference voltage input terminal to A/D converter.
76	GND	—	GND connection terminal.
77	GND	—	GND connection terminal.
78	GND	—	GND connection terminal.
79	T-SENS	I	Temperature sensor signal input terminal.
80	NOSE ON	I	Front Panel detection signal input terminal.

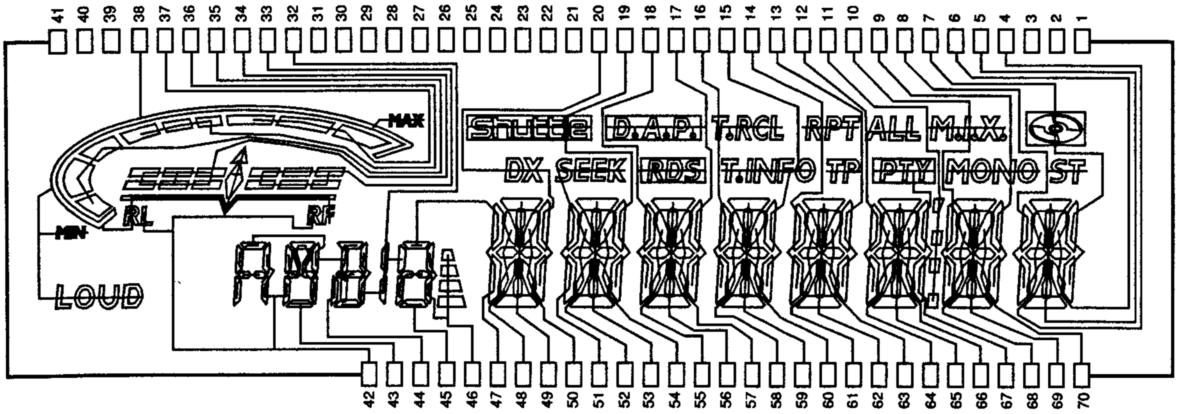
85088W01 : IC504

No.	Symbol	I/O	Terminal Description
1	LW	O	LW band selection output terminal.
2	LO/$\overline{\text{DX}}$	O	Local/DX control output terminal. H: During SEEK LOCAL
3	NC	—	No connection terminal.
4	AV_{SS}	—	GND connection terminal for A/D converter.
5	$\overline{\text{LPF SW}}$	O	LPF time constant switching terminal at AF CHECK.
6	IF MUTE	O	IF Mute output terminal.
7	$AV_{REF}1$	—	Reference voltage terminal for A/D converter.
8	PULL UP	—	Pull up terminal.
9	NC	—	No connection terminal.
10	NC	—	No connection terminal.
11	PLL CLK	O	Clock output terminal to PLL.
12	PLL DATA	O	Data output terminal to PLL.
13	PLL CE	O	Data communication control signal output terminal to PLL.
14	DTS MUTE	O	Audio mute output terminal.
15	DTS START	I	DTS data start input teminal.
16	DTS CMD	I	Command input terminal from Main µ-COM.
17	DTS STS	O	Status output terminal to Main µ-COM.
18	DTS CLK	I	Communication clock signal input terminal from Main µ-COM.
19 ~ 32	NC	—	No connection terminal.
33	GND	—	GND connection terminal.
34 ~ 57	NC	—	No connection terminal.
58	FM/$\overline{\text{AM}}$	O	FM/AM mode switching signal output terminal. H: FM
59	AUDIO IN	I	Audio xerox Detection terminal.
60	RESET	I	System reset input terminal.
61	RDS CLK	I	RDS clock input terminal from RDS Decoder.
62	RDS DATA	I	RDS data input terminal from RDS Decoder.
63	DTS CE	I	DTS CE input terminal.
64 ~ 66	NC	—	No connection terminal.

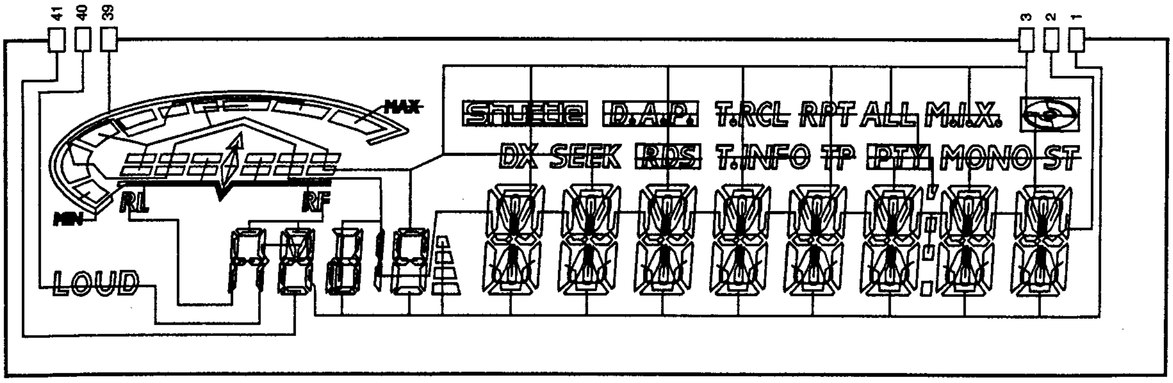
No.	Symbol	I/O	Terminal Description
67	50K REF	O	L.P.F. switching output terminal at RDS mode.
68	V_{DD}	—	Power supply terminal.
69	X2	—	System clock OSC connection terminal. (4.9152MHz)
70	X1	—	
71	GND	—	GND connection terminal.
72	NC	—	No connection terminal.
73	PLL DATAI	I	PLL Data input terminal.
74	AV_{DD}	—	Analog power supply terminal for A/D converter.
75	$AV_{REF}0$	—	Reference voltage terminal for A/D converter.
76	S. METER	I	Signal meter voltage input terminal.
77	A/I	I	Port detects adjoining rejection interference of station.
78	M.P	I	Port detects multi path interference of station.
79	ST	I	ST signal input terminal.
80	SD	I	Station detector signal input terminal.

LCD Display

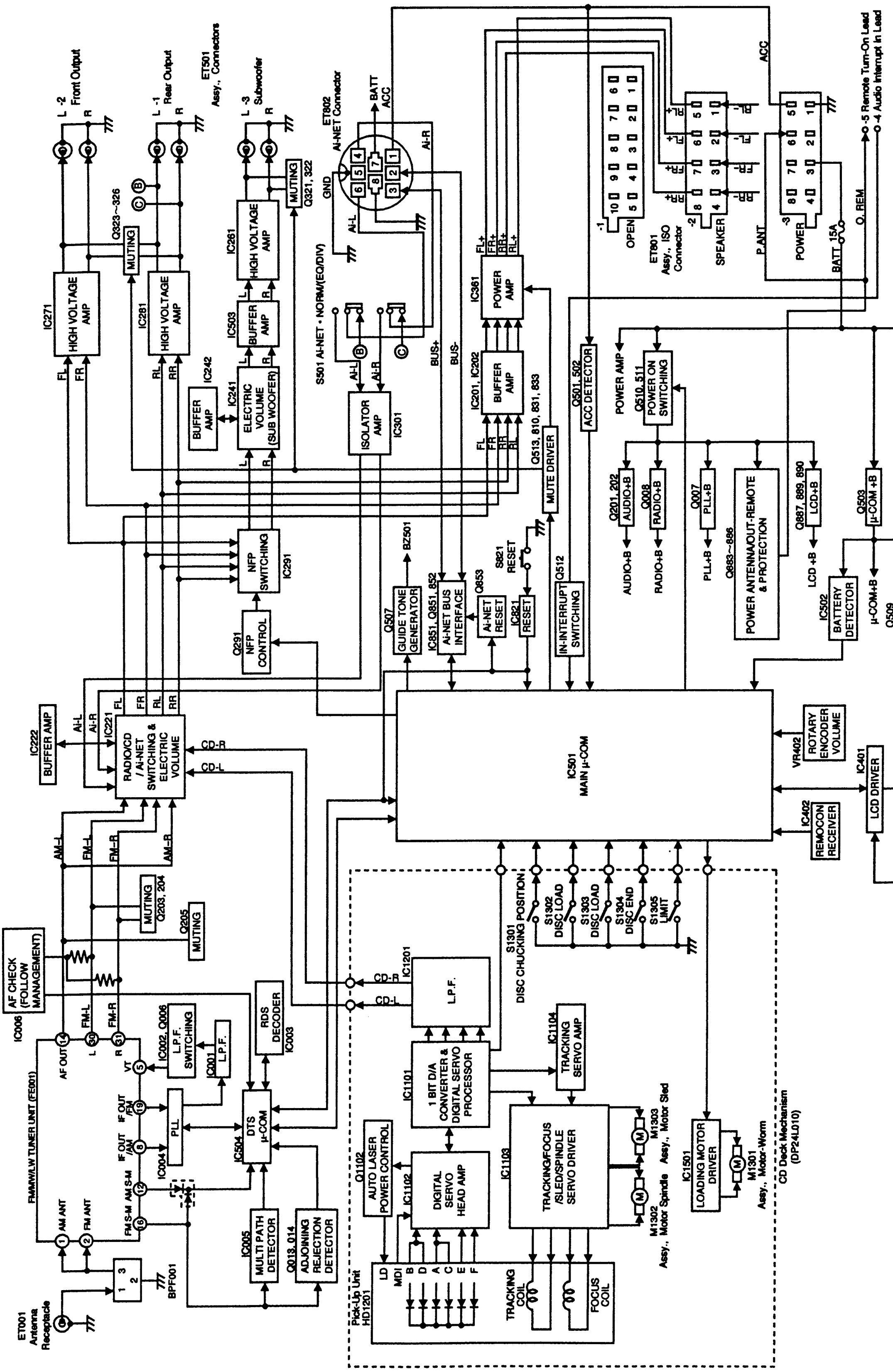
Segment


41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
MAX
MIN
RL
RF
LOUD
Shuttle
D.A.P.
T.RCL
RPT
ALL
M.I.X.
DX
SEEK
RDS
T.INFO
TP
PTY
MONO
ST
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70

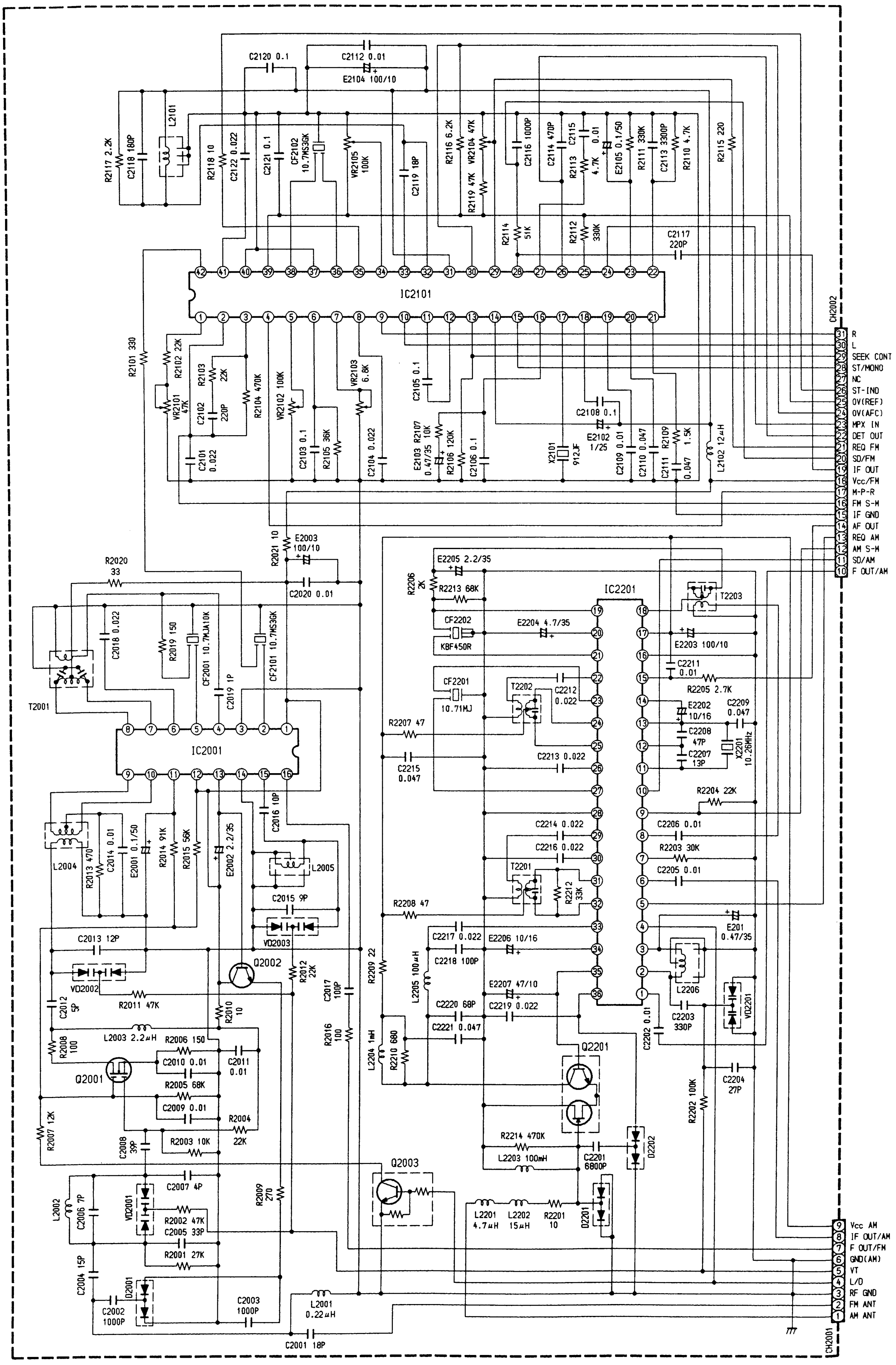
Common


41 40 39
3 2 1
MAX
MIN
RL
RF
LOUD
Shuttle
D.A.P.
T.RCL
RPT
ALL
M.I.X.
DX
SEEK
RDS
T.INFO
TP
PTY
MONO
ST

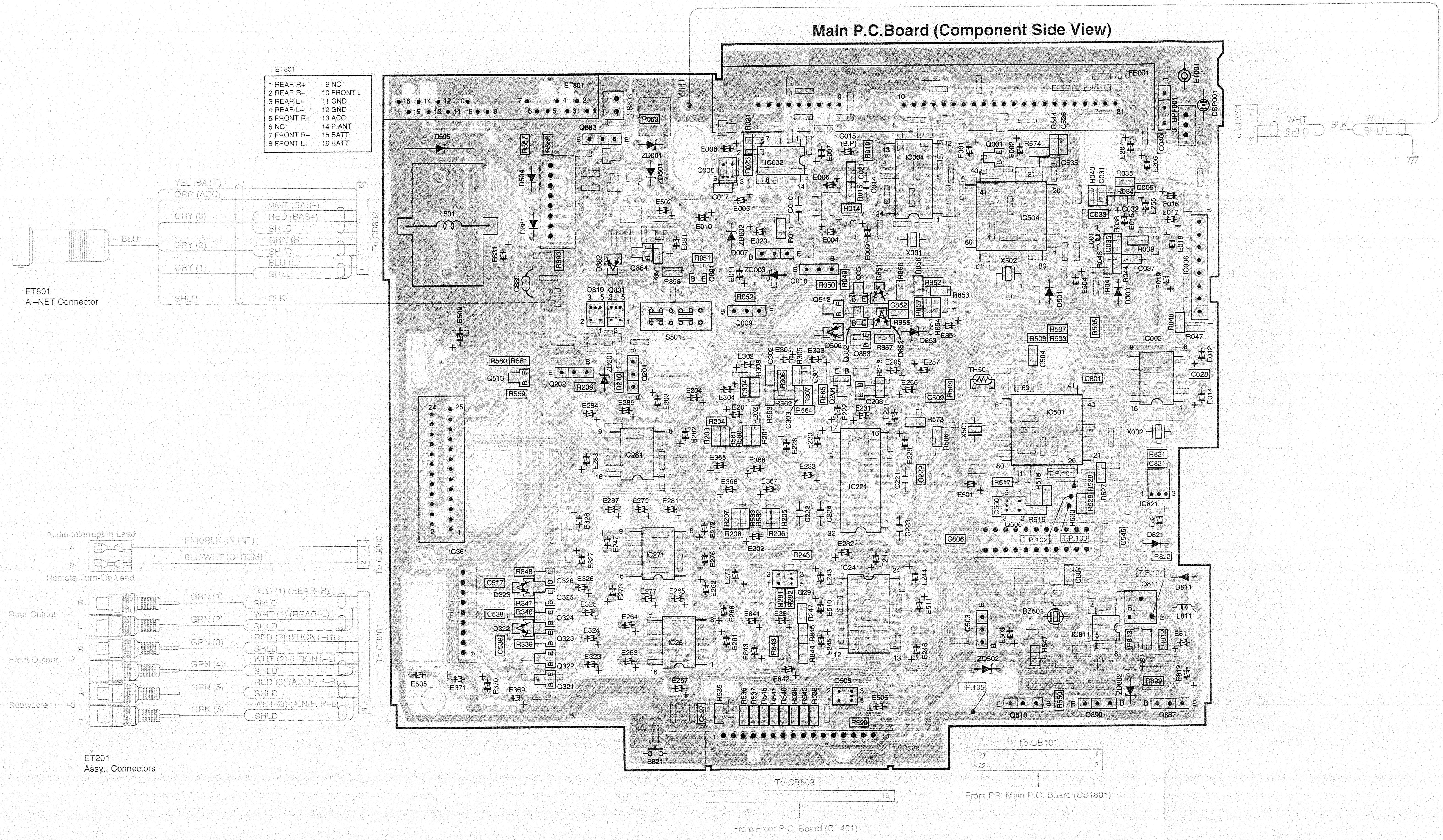
Block Diagram


ET001 Antenna Receptacle
BPF001
FM/MW/LW TUNER UNIT (FE001)
AM ANT
FM ANT
FM S-M
AM S-M
IF OUT /AM
IF OUT FM
VT
AF OUT
FM-L
FM-R
IC006
AF CHECK (FOLLOW MANAGEMENT)
IC004 PLL
IC002, Q006 L.P.F. SWITCHING
IC001 L.P.F.
IC003 RDS DECODER
IC504 DTS μ-COM
IC005 MULTI PATH DETECTOR
Q013, 014 ADJOINING REJECTION DETECTOR
Q203, 204 MUTING
Q205 MUTING
AM-L
AM-R
IC222 BUFFER AMP
IC221 RADIO/CD /Ai-NET SWITCHING & ELECTRIC VOLUME
Ai-L
Ai-R
CD-R
CD-L
FL
FR
RL
RR
Q291 NFP CONTROL
IC291 NFP SWITCHING
IC242 BUFFER AMP
IC241 ELECTRIC VOLUME (SUB WOOFER)
IC503 BUFFER AMP
IC261 HIGH VOLTAGE AMP
Q321, 322 MUTING
IC271 HIGH VOLTAGE AMP
IC281 HIGH VOLTAGE AMP
Q323~326 MUTING
L -2 Front Output R
L -1 Rear Output R
L -3 Subwoofer R
ET501 Assy., Connectors
IC301 ISOLATOR AMP
S501 Ai-NET • NORM/(EQ/DIV)
ET802 Ai-NET Connector
BATT
ACC
GND
BUS+
BUS-
Q507 GUIDE TONE GENERATOR
BZ501
IC851, Q851, 852 Ai-NET BUS INTERFACE
Q853 Ai-NET RESET
IC821 RESET
S821 RESET
Q512 IN-INTERRUPT SWITCHING
Q513, 810, 831, 833 MUTE DRIVER
IC201, IC202 BUFFER AMP
IC361 POWER AMP
FL+
FR+
RR+
RL+
Q501, 502 ACC DETECTOR
ET801 Assy., ISO Connector
OPEN
SPEAKER
POWER
P.ANT
BATT 15A
O. REM
-5 Remote Turn-On Lead
-4 Audio Interrupt In Lead
POWER AMP
Q510, 511 POWER ON SWITCHING
Q201, 202 AUDIO+B
Q008 RADIO+B
Q007 PLL+B
Q883~886 POWER ANTENNA/OUT-REMOTE & PROTECTION
Q887, 889, 890 LCD+B
Q503 μ-COM +B
IC811, Q811~813 SWITCHING REGULATOR
IC502 BATTERY DETECTOR
Q509 Ai-NET BUS +B
Q508 CD AUDIO+B
AUDIO+B
RADIO+B
PLL+B
LCD +B
μ-COM+B
Ai-NET BUS +B
IC501 MAIN μ-COM
VR402 ROTARY ENCODER VOLUME
IC401 LCD DRIVER
LCD401 LCD DISPLAY
IC402 REMOCON RECEIVER
KEY MATRIX S401~417
S1301 DISC CHUCKING POSITION
S1302 DISC LOAD
S1303 DISC LOAD
S1304 DISC END
S1305 LIMIT
IC1201 L.P.F.
IC1101 1 BIT D/A CONVERTER & DIGITAL SERVO PROCESSOR
IC1104 TRACKING SERVO AMP
IC1102 DIGITAL SERVO HEAD AMP
Q1102 AUTO LASER POWER CONTROL
IC1103 TRACKING/FOCUS /SLED/SPINDLE SERVO DRIVER
M1302 Assy., Motor Spindle
M1303 Assy., Motor Sled
IC1501 LOADING MOTOR DRIVER
M1301 Assy., Motor-Worm
CD Deck Mechanism (DP24L010)
Pick-Up Unit HD1201
LD
MDI
TRACKING COIL
FOCUS COIL

Tuner Schematic Diagram


C2120 0.1
C2112 0.01
E2104 100/10
R2117 2.2K
C2118 180P
L2101
R2118 10
C2122 0.022
C2121 0.1
CF2102 10.7MS3GK
VR2105 100K
C2119 18P
R2116 6.2K
VR2104 47K
R2119 47K
C2116 1000P
C2114 470P
C2115 0.01
R2113 4.7K
E2105 0.1/50
R2111 330K
C2113 3300P
R2110 4.7K
R2115 220
R2114 51K
R2112 330K
C2117 220P
IC2101
R2101 330
R2102 22K
R2103 22K
C2102 220P
VR2101 47K
C2101 0.022
R2104 470K
VR2102 100K
C2103 0.1
R2105 36K
VR2103 6.8K
C2104 0.022
C2105 0.1
E2103 0.47/35
R2107 10K
R2106 120K
C2106 0.1
C2108 0.1
E2102 1/25
X2101 912JF
C2109 0.01
C2110 0.047
C2111 0.047
R2109 1.5K
L2102 12μH
CH2002
31 R
30 L
29 SEEK CONT
28 ST/MONO
27 NC
26 ST-IND
25 0V(REF)
24 0V(AFC)
23 MPX IN
22 DET OUT
21 REQ FM
20 SD/FM
19 IF OUT
18 Vcc/FM
17 M-P-R
16 FM S-M
15 IF GND
14 AF OUT
13 REQ AM
12 AM S-M
11 SD/AM
10 F OUT/AM
R2021 10
E2003 100/10
C2020 0.01
R2020 33
C2018 0.022
R2019 150
CF2001 10.7MJA10K
C2019 1P
CF2101 10.7MS3GK
T2001
IC2001
L2004
R2013 470
C2014 0.01
E2001 0.1/50
R2014 91K
R2015 56K
E2002 2.2/35
C2016 10P
L2005
C2015 9P
VD2003
C2013 12P
VD2002
C2012 5P
R2011 47K
Q2002
R2012 22K
C2017 100P
R2010 10
R2008 100
L2003 2.2μH
R2006 150
C2010 0.01
C2011 0.01
Q2001
R2005 68K
C2009 0.01
R2004 22K
R2007 12K
C2008 39P
R2003 10K
C2007 4P
L2002
C2006 7P
VD2001
R2002 47K
C2005 33P
R2009 270
R2001 27K
C2004 15P
D2001
C2002 1000P
C2003 1000P
L2001 0.22μH
C2001 18P
R2016 100
R2209 22
R2206 2K
E2205 2.2/35
R2213 68K
IC2201
CF2202 KBF450R
E2204 4.7/35
T2203
E2203 100/10
C2211 0.01
R2205 2.7K
CF2201 10.71MJ
T2202
C2212 0.022
E2202 10/16
C2209 0.047
C2208 47P
X2201 10.26MHz
C2207 13P
R2207 47
C2213 0.022
C2215 0.047
R2204 22K
C2214 0.022
C2206 0.01
C2216 0.022
R2203 30K
T2201
R2212 33K
C2205 0.01
R2208 47
E201 0.47/35
C2217 0.022
E2206 10/16
C2218 100P
L2205 100μH
L2206
E2207 47/10
C2220 68P
C2219 0.022
C2203 330P
VD2201
C2221 0.047
C2202 0.01
L2204 1mH
R2210 680
Q2201
C2204 27P
R2202 100K
R2214 470K
L2203 100mH
C2201 6800P
D2202
Q2003
L2201 4.7μH
L2202 15μH
R2201 10
D2201
9 Vcc AM
8 IF OUT/AM
7 F OUT/FM
6 GND(AM)
5 VT
4 L/O
3 RF GND
2 FM ANT
1 AM ANT
CH2001

Parts Layout on P.C. Boards and Wiring Diagram (1/4)


1
2
3
4
5
Main P.C.Board (Component Side View)
ET801
1 REAR R+
2 REAR R–
3 REAR L+
4 REAR L–
5 FRONT R+
6 NC
7 FRONT R–
8 FRONT L+
9 NC
10 FRONT L–
11 GND
12 GND
13 ACC
14 P.ANT
15 BATT
16 BATT
YEL (BATT)
ORG (ACC)
GRY (3)
GRY (2)
GRY (1)
SHLD
BLU
WHT (BAS–)
RED (BAS+)
GRN (R)
BLU (L)
BLK
To CB802
ET801
Ai–NET Connector
Audio Interrupt In Lead
Remote Turn-On Lead
PNK/BLK (IN INT)
BLU/WHT (O–REM)
To CB803
Rear Output -1
Front Output -2
Subwoofer -3
GRN (1)
GRN (2)
GRN (3)
GRN (4)
GRN (5)
GRN (6)
RED (1) (REAR–R)
WHT (1) (REAR–L)
RED (2) (FRONT–R)
WHT (2) (FRONT–L)
RED (3) (A.N.F. P–R)
WHT (3) (A.N.F. P–L)
To CB201
ET201
Assy., Connectors
To CH001
WHT
SHLD
BLK
ET001
DSP001
CH001
To CB503
From Front P.C. Board (CH401)
To CB101
From DP–Main P.C. Board (CB1801)
IC002
IC004
IC504
IC501
IC221
IC241
IC281
IC271
IC261
IC361
IC003
IC006
IC811
IC821
L501
S501
S821
X001
X002
X501
X502
BZ501
TH501

Orange Color Pattern : Component Side Pattern
Blue Color Pattern : Foil Side Pattern

Parts Layout on P.C. Boards and Wiring Diagram (2/4)

1

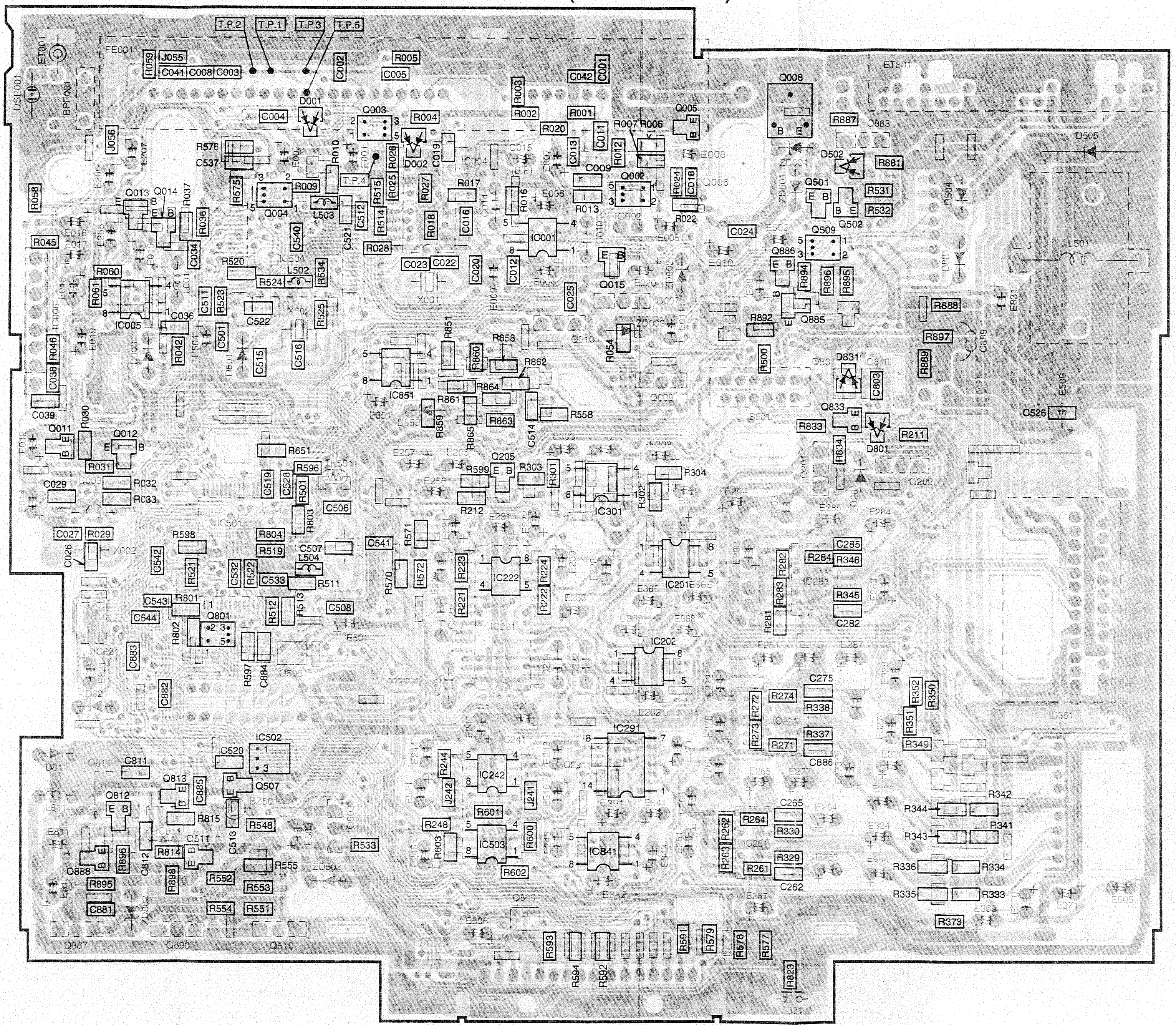
2

3

4

5

Main P.C.Board (Foil Side View)


T.P.2
T.P.1
T.P.3
T.P.5
T.P.4
ET001
DSE001
BPF001
FE001
ET801
J055
J056
C041
C008
C003
C002
R005
C005
R003
C042
C001
D001
C004
Q003
R004
R002
R001
R020
R007
R006
Q005
Q008
R887
C883
D505
R576
C537
R010
R026
D002
C019
R017
C013
C011
R012
C009
Q002
R024
C018
D502
R881
Q501
R531
R532
Q502
Q509
R058
Q013
Q014
R037
R036
R009
L503
R515
R514
R025
R027
R018
C016
R016
IC001
R013
R022
C024
Q886
R894
R896
R895
L501
R045
R060
C034
R520
C540
R524
L502
R534
C521
R028
C023
C022
C020
C012
Q015
C025
R061
IC005
C036
C511
R523
C522
R525
X001
R851
R854
Q885
R892
R888
R897
R046
R042
C501
C515
C516
R860
R858
R862
IC851
R054
R500
D831
C803
R889
C038
C039
R861
R864
R859
R865
R863
R558
C514
Q833
R833
R834
D801
R211
C526
E509
Q011
Q012
R030
R031
R032
R033
C029
R651
R596
C539
C528
R501
R803
C506
C205
R599
R303
R301
IC301
R304
R302
R212
C027
R029
C026
R598
R804
R519
C507
L504
C533
R511
C541
R571
R570
R572
R223
IC222
R224
R222
R221
IC201
R282
R284
R346
C285
R283
R345
C282
C542
R521
C532
R522
C543
R801
C544
Q801
R802
R512
R513
C508
IC202
R281
C883
C882
R597
C884
C275
R274
R338
R272
R273
R271
R337
R352
R350
R351
R349
IC361
IC502
C520
C811
Q813
C885
Q507
R815
R548
Q812
R896
R814
C511
C513
C812
R898
R895
C881
R552
R553
R554
R551
R555
R533
IC291
R244
R242
IC242
R241
R601
R248
R603
IC503
R600
R602
IC841
R264
R330
R265
R262
R263
R261
R329
C262
C886
C265
R342
R344
R341
R343
R336
R334
R335
R333
R373
R593
R594
R592
R591
R579
R578
R577
R823
Q887
Q890
Q510

Orange Color Pattern : Component Side Pattern
Blue Color Pattern : Foil Side Pattern

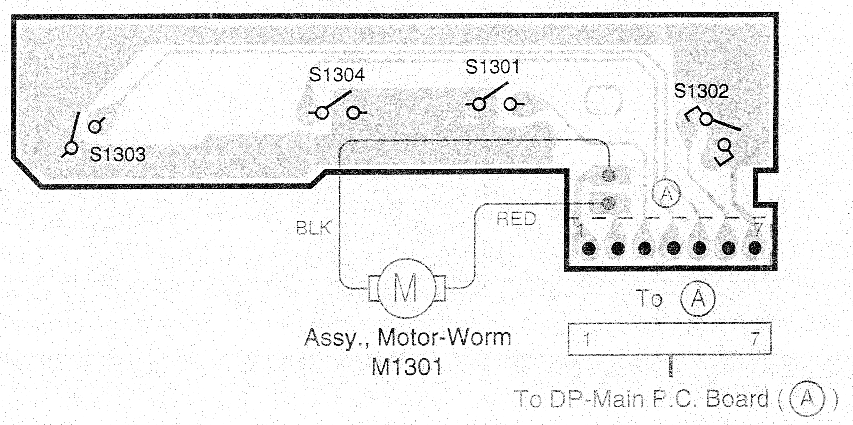
A | B | C | D | E | F | G |

Parts Layout on P.C. Boards and Wiring Diagram (3/4)

All P.C. Boards viewed from soldered side.

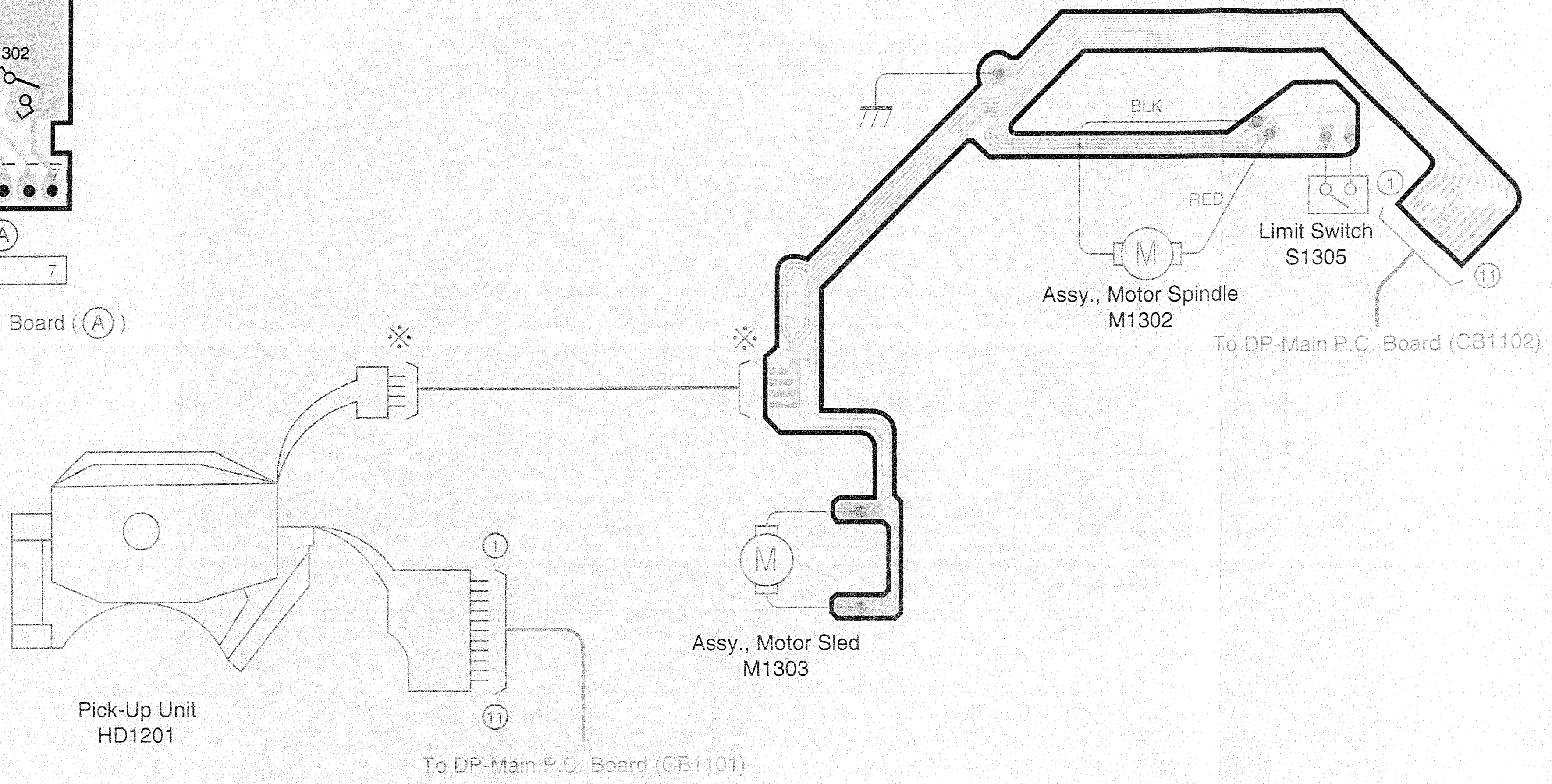
1
2
3
4
5

Switch / Motor P.C.Board



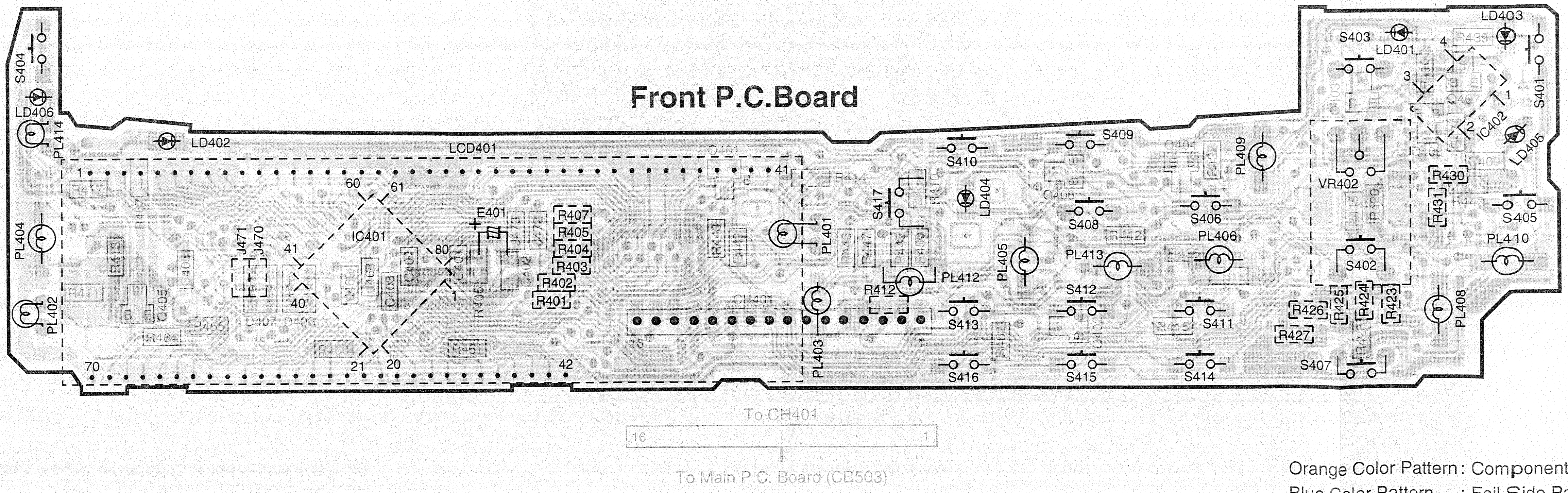
S1304
S1301
S1302
S1303
BLK
RED
Ⓐ
1
7
Assy., Motor-Worm
M1301
To Ⓐ
1
7
To DP-Main P.C. Board (Ⓐ)

FPC DP-L Control P.C.Board



BLK
RED
Limit Switch
S1305
①
⑪
Assy., Motor Spindle
M1302
To DP-Main P.C. Board (CB1102)
※
※
①
⑪
Pick-Up Unit
HD1201
Assy., Motor Sled
M1303
To DP-Main P.C. Board (CB1101)

Front P.C.Board



S404
LD406
PL414
LD402
LCD401
Q401
1
41
R417
60
61
IC401
41
80
40
1
21
20
42
70
J471
J470
E401
R407
R405
R404
R403
R402
R401
R406
PL404
PL402
R413
R411
R464
R466
Q405
D407
D408
CH401
16
PL401
PL403
R414
S417
R410
LD404
R412
PL412
S410
S408
S413
S416
PL405
S409
PL413
S412
S415
Q404
S406
PL406
S411
S414
PL409
VR402
R419
R420
S402
R426
R425
R424
R423
R427
S407
PL408
S403
LD401
LD403
R439
4
3
2
1
Q406
IC402
LD405
S401
R430
R431
S405
PL410
To CH401
16
1
To Main P.C. Board (CB503)

Orange Color Pattern : Component Side Pattern
Blue Color Pattern : Foil Side Pattern

A B C D E F G

Parts Layout on P.C. Boards and Wiring Diagram (4/4)

All P.C. Boards viewed from soldered side.

1

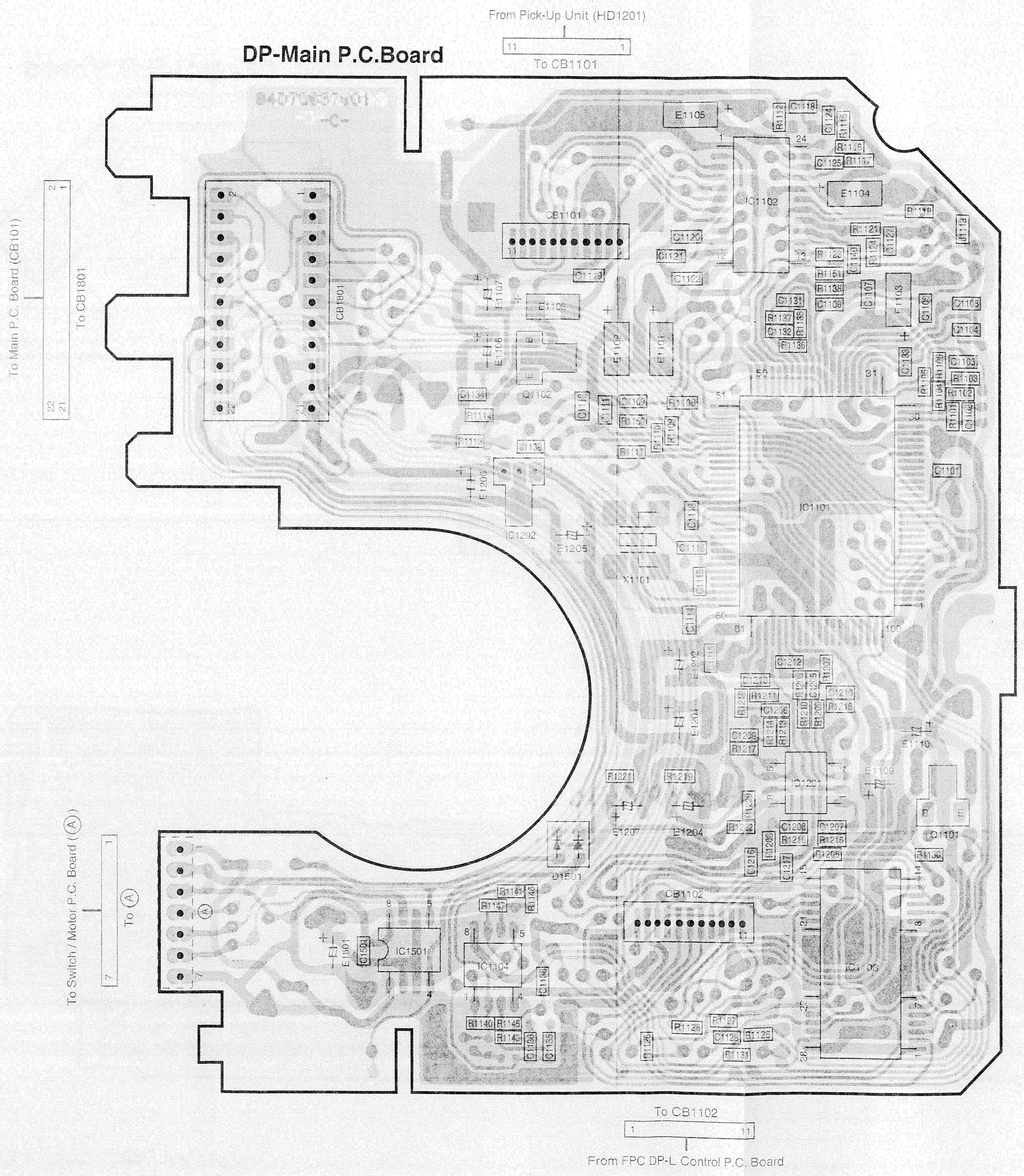
2

3

4

5

DP-Main P.C.Board

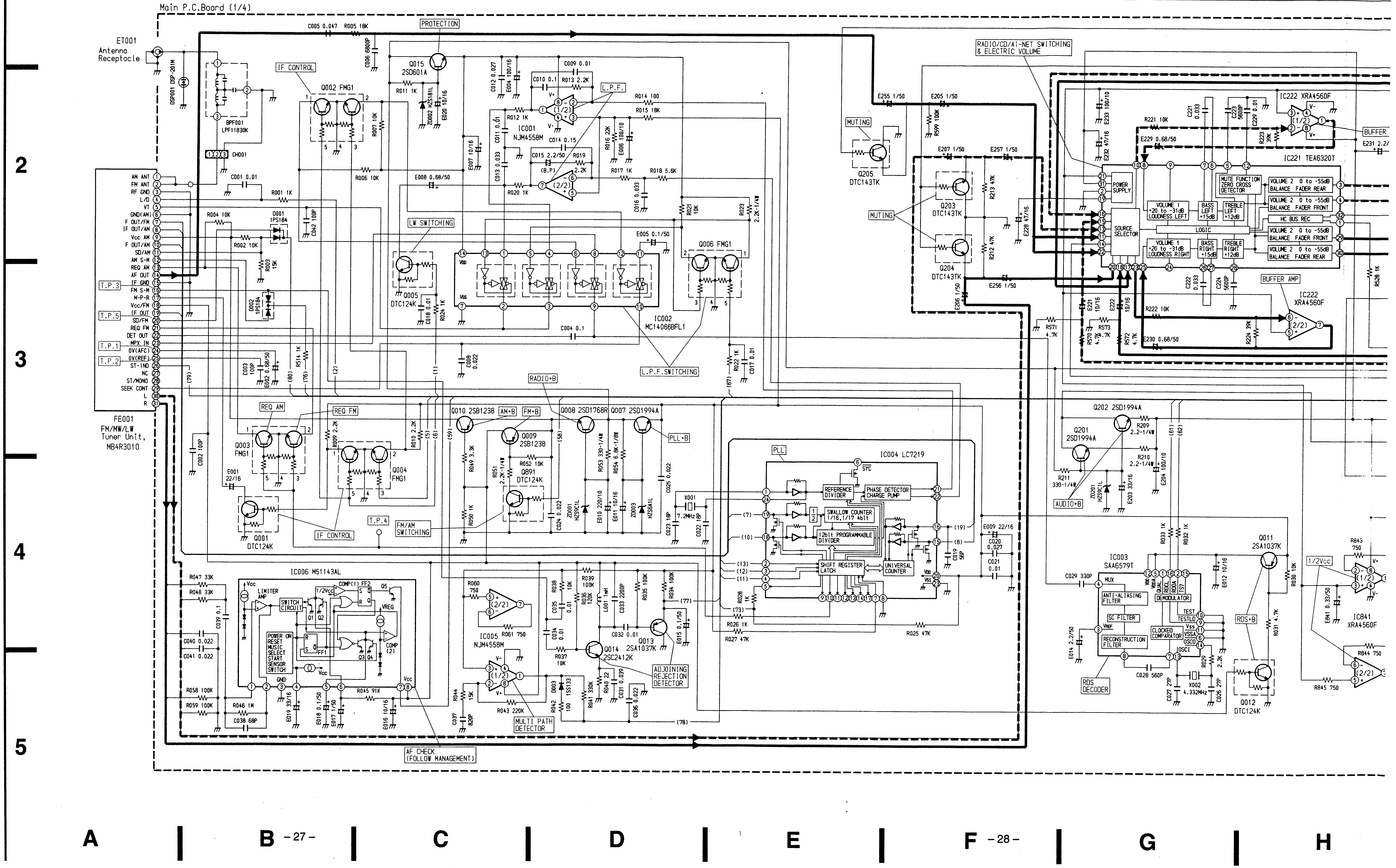

From Pick-Up Unit (HD1201)
11
1
To CB1101
To Main P.C. Board (CB101)
To CB1801
CB1801
CB1101
IC1102
E1105
E1104
E1103
E1101
E1102
E1106
E1107
E1108
E1206
Q1102
IC1202
E1205
X1101
IC1101
IC1201
E1201
E1202
E1204
E1207
E1109
E1110
Q1101
D1501
CB1102
IC1103
IC1104
IC1501
E1501
To Switch / Motor P.C. Board (Ⓐ)
To Ⓐ
Ⓐ
To CB1102
From FPC DP-L Control P.C. Board

Orange Color Pattern : Component Side Pattern
Blue Color Pattern : Foil Side Pattern

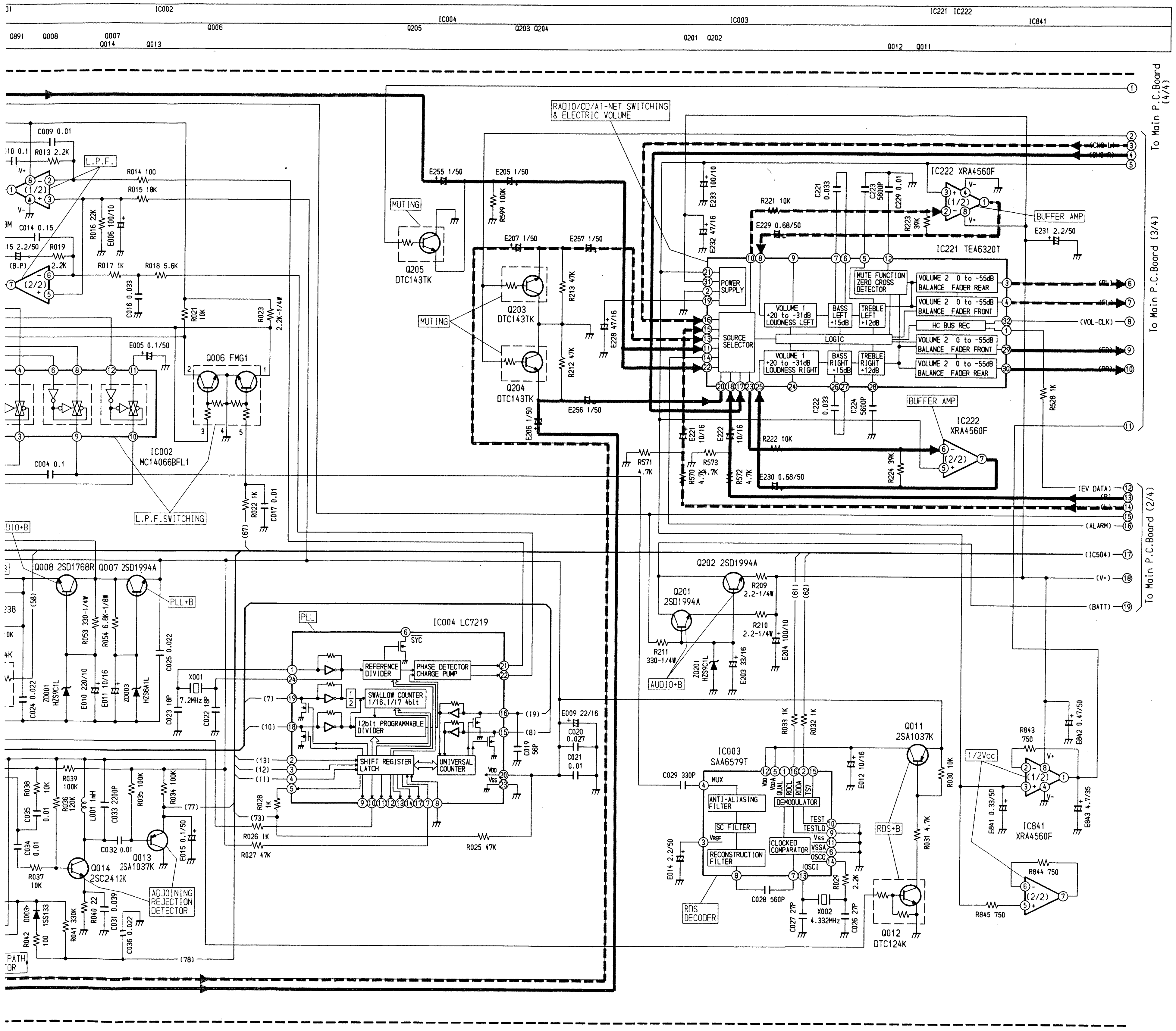
A B C D E F G

Schematic Diagram (1/5)

IC	IC006 IC005 IC001 IC002 IC004 IC003 IC221 IC222 IC841
Transistor (Q)	Q003 Q001 Q002 Q005 Q015 Q004 Q010 Q009 Q891 Q008 Q007 Q014 Q013 Q006 Q205 Q203 Q204 Q201 Q202 Q012 Q011



1
2
3
4
5
Main P.C.Board (1/4)
ET001 Antenna Receptacle
DSP001 DSP-201M
BPF001 LPF11830K
CH001
PROTECTION
IF CONTROL
Q002 FMG1
Q015 2SD601A
ZD002 HZS18L
IC001 NJM4558M
L.P.F.
(1/2)
(2/2)
(B.P)
LW SWITCHING
Q005 DTC124K
IC002 MC14066BFL1
Q006 FMG1
L.P.F.SWITCHING
D001 1PS184
D002 1PS184
FE001 FM/MW/LW Tuner Unit, MB4R3010
AM ANT
FM ANT
RF GND
L/D
VT
GND(AM)
F OUT/FM
IF OUT/AM
Vcc AM
F OUT/AM
SD/AM
AM S-M
REQ AM
AF OUT
IF GND
FM S-M
M-P-R
Vcc/FM
IF OUT
SD/FM
REQ FM
DET OUT
MPX IN
OV(AFC)
OV(REF)
ST-IND
NC
ST/MONO
SEEK CONT
L
R
T.P.3
T.P.5
T.P.1
T.P.2
T.P.4
REQ AM
REQ FM
Q003 FMG1
Q004 FMG1
Q001 DTC124K
IF CONTROL
RADIO+B
Q010 2SB1238
AM+B
FM+B
Q008 2SD1768R
Q007 2SD1994A
PLL+B
Q009 2SB1238
Q891 DTC124K
FM/AM SWITCHING
ZD001 HZS9C1L
ZD003 HZS6A1L
X001 7.2MHz
PLL
IC004 LC7219
REFERENCE DIVIDER
PHASE DETECTOR CHARGE PUMP
SYC
SWALLOW COUNTER 1/16,1/17 4bit
12bit PROGRAMMABLE DIVIDER
SHIFT REGISTER LATCH
UNIVERSAL COUNTER
IC006 M51143AL
LIMITER AMP
SWITCH CIRCUIT
POWER ON RESET MUSIC SELECT START SENSOR SWITCH
COMP(1) FF2
COMP (2)
VREG
FF1
IC005 NJM4558M
MULTI PATH DETECTOR
Q014 2SC2412K
Q013 2SA1037K
ADJOINING REJECTION DETECTOR
AF CHECK (FOLLOW MANAGEMENT)
MUTING
Q205 DTC143TK
Q203 DTC143TK
Q204 DTC143TK
RADIO/CD/Ai-NET SWITCHING & ELECTRIC VOLUME
IC221 TEA6320T
POWER SUPPLY
SOURCE SELECTOR
LOGIC
VOLUME 1 +20 to -31dB LOUDNESS LEFT
VOLUME 1 +20 to -31dB LOUDNESS RIGHT
BASS LEFT +15dB
BASS RIGHT +15dB
TREBLE LEFT +12dB
TREBLE RIGHT +12dB
MUTE FUNCTION ZERO CROSS DETECTOR
VOLUME 2 0 to -55dB BALANCE FADER REAR
VOLUME 2 0 to -55dB BALANCE FADER FRONT
HC BUS REC
IC222 XRA4560F
BUFFER
BUFFER AMP
Q202 2SD1994A
Q201 2SD1994A
ZD201 HZS9C1L
AUDIO+B
IC003 SAA6579T
MUX
ANTI-ALIASING FILTER
SC FILTER
RECONSTRUCTION FILTER
DEMODULATOR
CLOCKED COMPARATOR
RDS DECODER
RDS+B
X002 4.332MHz
Q011 2SA1037K
Q012 DTC124K
1/2Vcc
IC841 XRA4560F
A
B
C
D
E
F
G
H


IC002
IC004
IC003
IC221 IC222
IC841
Q891 Q008 Q007 Q014 Q013 Q006 Q205 Q203 Q204 Q201 Q202 Q012 Q011
RADIO/CD/AI-NET SWITCHING & ELECTRIC VOLUME
MUTING
Q205 DTC143TK
Q203 DTC143TK
Q204 DTC143TK
IC222 XRA4560F
BUFFER AMP
IC221 TEA6320T
POWER SUPPLY
SOURCE SELECTOR
VOLUME 1 +20 to -31dB LOUDNESS LEFT
VOLUME 1 +20 to -31dB LOUDNESS RIGHT
BASS LEFT ±15dB
TREBLE LEFT ±12dB
BASS RIGHT ±15dB
TREBLE RIGHT ±12dB
MUTE FUNCTION ZERO CROSS DETECTOR
VOLUME 2 0 to -55dB BALANCE FADER REAR
VOLUME 2 0 to -55dB BALANCE FADER FRONT
HC BUS REC
LOGIC
L.P.F.
L.P.F.SWITCHING
IC002 MC14066BFL1
Q006 FMG1
Q008 2SD1768R
Q007 2SD1994A
PLL+B
PLL
IC004 LC7219
REFERENCE DIVIDER
PHASE DETECTOR CHARGE PUMP
SWALLOW COUNTER 1/16,1/17 4bit
12bit PROGRAMMABLE DIVIDER
SHIFT REGISTER LATCH
UNIVERSAL COUNTER
X001 7.2MHz
Q014 2SC2412K
Q013 2SA1037K
ADJOINING REJECTION DETECTOR
Q202 2SD1994A
Q201 2SD1994A
AUDIO+B
IC003 SAA6579T
MUX
ANTI-ALIASING FILTER
SC FILTER
RECONSTRUCTION FILTER
DEMODULATOR
CLOCKED COMPARATOR
RDS DECODER
X002 4.332MHz
Q011 2SA1037K
RDS+B
Q012 DTC124K
1/2Vcc
IC841 XRA4560F
To Main P.C.Board (4/4)
To Main P.C.Board (3/4)
To Main P.C.Board (2/4)
(VOL-CLK)
(EV DATA)
(ALARM)
(IC504)
(V+)
(BATT)

IC001

1	4.08V
2, 3	2.62V
4	0V
5, 6	2.62V
7	2.04V
8	13.28V

IC002

1	2.19V	
2~4	4.08V	
5, 6	13.24V	
7	0V	
8, 9	2.47V	
10	2.48V/ 0V	SEEK/ Power ON
11	0V	Power ON
12	13.33V/ 13.24V	LW · MW/ FM
13	12.2V/ 0V	LW · MW/ FM
14	13.35V/ 13.25V	LW · MW/ FM

IC003

1	NC
2	PS
3	2.4V
4	2.38V
5	4.78V
6	0V
7	2.38V
8	2.43V
9~11	0V
12	4.78V
13, 14	PS
15	NC
16	PS

IC004

1~5	PS	
6	NC	
7	4.78V	
8	0V	
9	NC	
10	4.71V	
11~14	NC	
15, 16	0V	
17	NC	
18	PS/ 0V	LW · MW/ FM
19	0V/ PS	LW · MW/ FM
20	4.82V	
21, 22	2.62V	
23	0V	
24	PS	

IC005

1	4.81V
2	4.82V
3	4.77V
4	0V
5	4.77V
6, 7	4.82V
8	8.93V

IC006

1	1.44V
2	1.42V
3	0V
4	1.36V
5	0V
6	8.85V
7	5.14V
8	8.94V

IC221

1	5.15V	18	4.41V
2	0V	19	8.72V
3	4.42V	20	4.41V
4	4.43V	21, 22	4.42V
5~7	4.42V	23	4.43V
8	4.36V	24	NC
9	NC	25	4.36V
10	4.43V	26~28	4.42V
11	4.42V	29, 30	4.43V
12	8.74V	31	8.8V
13~15	4.41V	32	5.15V
16, 17	4.42V		

IC222

1~3	4.43V
4	0V
5~7	4.43V
8	8.82V

IC841

1, 2	4.44V
3	4.43V
4	0V
5	4.43V
6	4.44V
7	4.43V
8	8.82V

Q002

1	PS/ 0V	MUTE (at Function ON)/ Power ON
2	0V/ 13.26V	SEEK/ FM
3	4.43V/ 0V	SEEK/ FM
4	0V	
5	PS/ 0V	MUTE (at Function ON)/ Power ON

Q003

1	7.85V/ 0V	SEEK LW · MW/ LW · MW
2	0.95V/ 0V	SEEK FM/ FM
3	0V/ 4.37V	SEEK FM/ FM
4	0V	
5	0V/ 4.4V	SEEK LW · MW/ LW · MW

	E	C	B	MODE
Q001	0V	0V	4.4V	
Q005	0V	0V	4.92V/ 0V	LW/ FM · MW
Q007	4.8V	13.98V	5.41V	
Q008	9.01V	13.99V	9.59V	
Q009	8.99V/ 9.03V	0.638V/ 8.92V	8.98V/ 8.3V	LW · MW/ FM
Q010	9.02V/ 9.03V	8.95V/ 0V	8.3V/ 8.92V	LW · MW/ FM
Q011	4.11V	4.78V	4.8V	
Q012	0V	0V	8.92V	
Q013	4.76V	0V	4.77V	
Q014	0.62V	8.26V	1.21V	
Q015	13.3V	13.99V	13.96V	
Q201	8.91V	14.14V	9.52V	
Q202	8.9V	14.14V	9.52V	
Q203	0V	0V	13.24V/ 0V	MUTE ON/ OFF
Q204	0V	0V	13.24V/ 0V	MUTE ON/ OFF
Q205	0V	0V	0V	
Q891	0V	9.04V/ 0V	0V/ 5.14V	LW · MW/ FM

Q004

1	PS/ 0V	MUTE (at Function ON)/ Power ON
2	4.43V/ 0V	SEEK/ FM
3	0V/ 5.15V	SEEK/ FM
4	0V	
5	PS/ 0V	MUTE (at Function ON)/ Power ON

Q006

1	12.21V/ 0V	LW · MW/ FM
2	0V/ 13.26V	LW · MW/ FM
3	12.21V/ 0V	LW · MW/ FM
4	0V	LW · MW/ FM
5	0V/ 4.95V	LW · MW/ FM

[Measuring Conditions]

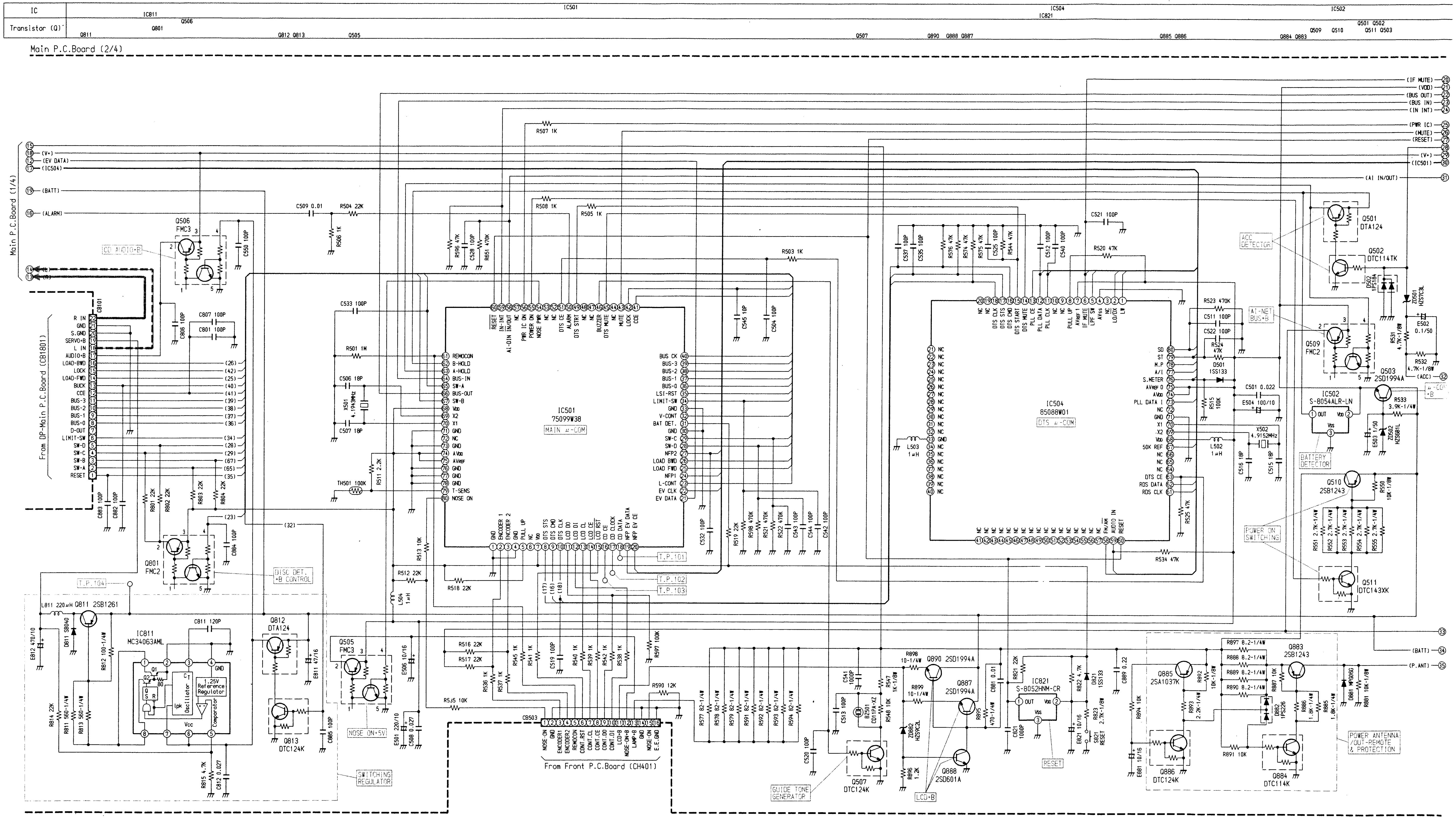
- Power Supply Voltage : DC14.4V
- Measuring Meter : Digital Multi Voltmeter
- Measuring Point Reference : Between Ground
- Measuring Conditions : CD : Be playing back the No. 8 Music of the test CD (TDC-782)
  Tuner : FM : 98.1MHz
  AM : 999kHz (MW)

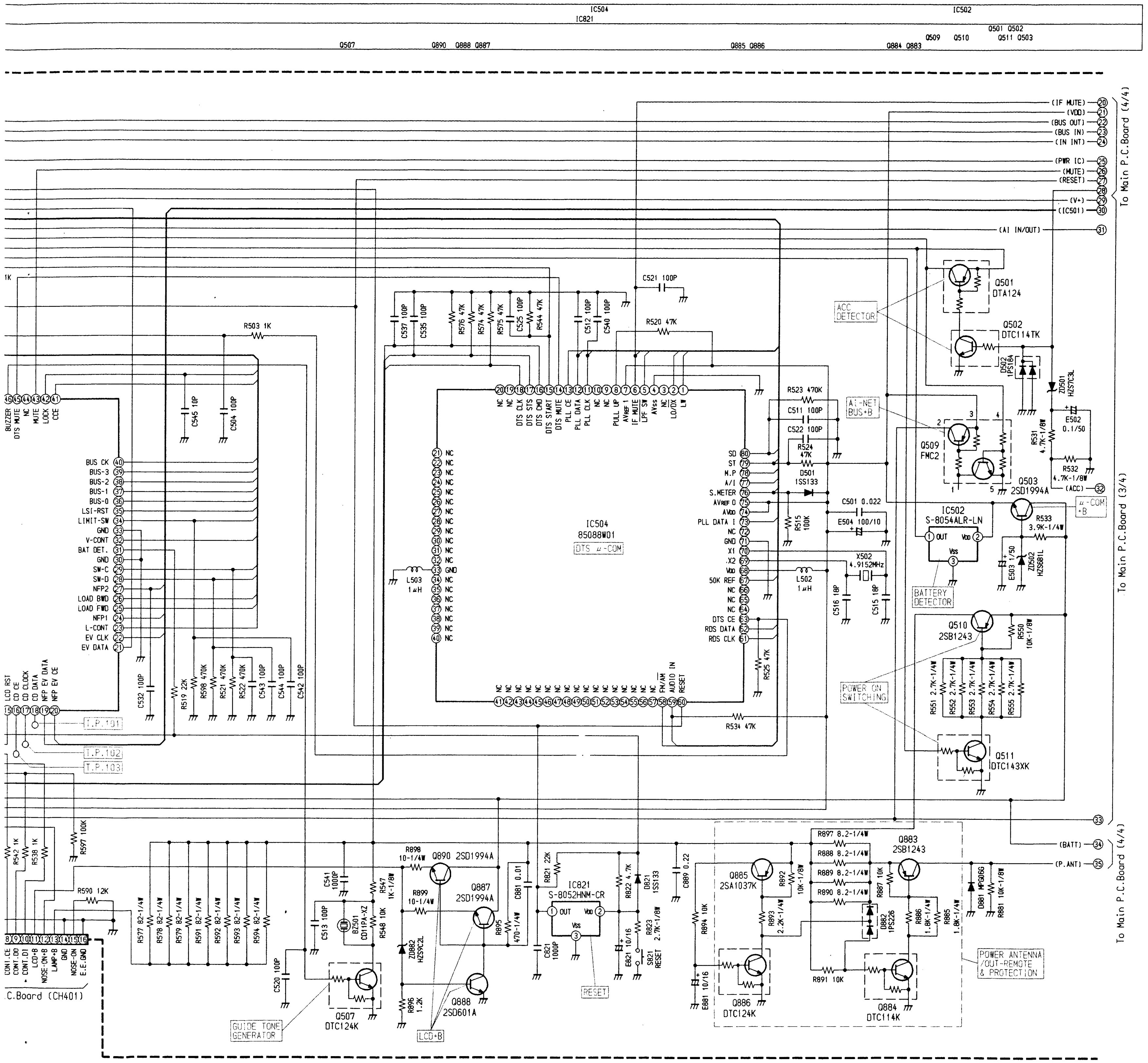
NOTE:

1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. $P = \frac{1}{1,000,000}$

D | E | F | G | H | I | J | K

Schematic Diagram (2/5)


IC
Transistor (Q)
IC811
IC501
IC504
IC821
IC502
Q506
Q801
Q811
Q812 Q813
Q505
Q507
Q890 Q888 Q887
Q885 Q886
Q884 Q883
Q509 Q510
Q501 Q502
Q511 Q503
Main P.C.Board (2/4)
Main P.C.Board (1/4)
From DP-Main P.C.Board (CB1801)
From Front P.C.Board (CH401)
IC501
75099W38
MAIN µ-COM
IC504
85088W01
DTS µ-COM
IC811
MC34063AML
IC502
S-8054ALR-LN
IC821
S-8052HNM-CR
Q506 FMC3
Q801 FMC2
Q811 2SB1261
Q812 DTA124
Q813 DTC124K
Q505 FMC3
Q507 DTC124K
Q890 2SD1994A
Q887 2SD1994A
Q888 2SD601A
Q885 2SA1037K
Q886 DTC124K
Q883 2SB1243
Q884 DTC114K
Q501 DTA124
Q502 DTC114TK
Q509 FMC2
Q503 2SD1994A
Q510 2SB1243
Q511 DTC143XK
CD AUDIO+B
DISC DET. +B CONTROL
SWITCHING REGULATOR
NOSE ON+5V
GUIDE TONE GENERATOR
LCD+B
RESET
ACC DETECTOR
AI-NET BUS+B
BATTERY DETECTOR
POWER ON SWITCHING
POWER ANTENNA /OUT-REMOTE & PROTECTION
T.P.101
T.P.102
T.P.103
T.P.104
(IF MUTE) 20
(VDD) 21
(BUS OUT) 22
(BUS IN) 23
(IN INT) 24
(PWR IC) 25
(MUTE) 26
(RESET) 27
(V+) 28
(IC501) 30
(AI IN/OUT) 31
(ACC) 32
(BATT) 34
(P.ANT) 35
(V+)
(EV DATA)
(IC504)
(BATT)
(ALARM)
R IN
GND
S.GND
SERVO+B
L IN
AUDIO+B
LOAD-BWD
LOCK
LOAD-FWD
BUCK
CCE
BUS-3
BUS-2
BUS-1
BUS-0
D-OUT
LIMIT-SW
SW-D
SW-C
SW-B
SW-A
RESET
REMOCON
B-HOLD
A-HOLD
BUS-IN
SW-A
BUS-OUT
SW-B
VDD
X2
X1
GND
NC
AVDD
AVREF
T-SENS
NOSE ON
BUS CK
LSI-RST
V-CONT
BAT DET.
NFP2
LOAD BWD
LOAD FWD
NFP1
L-CONT
EV CLK
EV DATA
RESET
IN-INT
AI-DIN IN/OUT
PWR IC ON
POWER ON
NOSE PWR
DTS CE
ALARM
DTS STRT
BUZZER
DTS MUTE
MUTE
LOCK
CCE
ENCODER 1
ENCODER 2
PULL UP
DTS STS
DTS CMD
DTS CLK
LCD DO
LCD DI
LCD CL
LCD CE
LCD RST
CD CLOCK
CD DATA
NFP EV DATA
NFP EV CE
SD
ST
M.P
A/I
S.METER
AVREF O
PLL DATA I
50K REF
RDS DATA
RDS CLK
FM/AM
AUDIO IN
LO/DX
LW
X501 4.1943MHz
X502 4.9152MHz
TH501 100K
L503 1µH
L502 1µH
L504 1µH
L811 220µH
1.25V Reference Regulator
Oscillator
Comparator
CB503
NOSE-ON
ENCODER1
ENCODER2
REMOCON
CONT.RST
CONT.CE
CONT.CL
CONT.DO
CONT.DI
LCD+B
NOSE-ON+B
LAMP+B
E.E.GND
1
2
3
4
5
A
B
C
D
E
F
G
H


IC504
IC821
IC502
Q501 Q502
Q509 Q510 Q511 Q503
Q507 Q890 Q888 Q887 Q885 Q886 Q884 Q883
IC504
85088W01
DTS μ-COM
IC502
S-8054ALR-LN
IC821
S-8052HNM-CR
Q501 DTA124
Q502 DTC114TK
Q503 2SD1994A
Q509 FMC2
Q510 2SB1243
Q511 DTC143XK
Q507 DTC124K
Q887 2SD1994A
Q888 2SD601A
Q890 2SD1994A
Q883 2SB1243
Q884 DTC114K
Q885 2SA1037K
Q886 DTC124K
ACC DETECTOR
AI-NET BUS+B
BATTERY DETECTOR
POWER ON SWITCHING
μ-COM +B
GUIDE TONE GENERATOR
LCD+B
RESET
POWER ANTENNA /OUT-REMOTE & PROTECTION
X502 4.9152MHz
(IF MUTE) 20
(VDD) 21
(BUS OUT) 22
(BUS IN) 23
(IN INT) 24
(PWR IC) 25
(MUTE) 26
(RESET) 27
28
(V+) 29
(IC501) 30
(AI IN/OUT) 31
(ACC) 32
33
(BATT) 34
(P.ANT) 35
To Main P.C.Board (4/4)
To Main P.C.Board (3/4)
To Main P.C.Board (4/4)
T.P.101
T.P.102
T.P.103
C.Board (CH401)

IC501

1	0V		45	5.17V/ 0V	TUNER/ CD
2, 3	5.08V		46	PS/ 0V	BUZZER ON/ OFF
4	0V		47, 48	NC	
5	5.15V		49	PS	
6	NC		50	0V	
7	5.16V		51	5.16V	
8~10	PS		52, 53	NC	
11	4.76V		54	5.15V	
12~14	PS		55	5.14V	
15	5.16V		56	5.17V	
16~18	TP		57	NC	
19	5.16V		58	4.62V	
20	5.16V/ 0V	NFP ON/OFF	59	0V	
21, 22	5.16V		60	5.17V	
23	0V/ 5.13V	DISC IN/OUT	61	PS	
24	5.15	NFP	62	4.84V	
25	5.15V/ 0V	CD LOAD/ CD	63	4.83V	
26	5.15V/ 0V	CD EJECT/ CD	64	0V	Power ON
27	0V		65	0V/ 5.17V	DISC IN/ OUT
28	0V/ PS/ 4.91V	DISC IN/ EJECT/ DISC OUT	66	0V	Power ON
29	0V/ PS/ 4.92V	DISC IN/ LOAD EJECT/ DISC OUT	67	5.17V/ 0V	CD EJECT/ CD
30	0V		68	5.18V	
31	5.15V		69, 70	PS	
32	5.15V/ 0V	CD/ Power ON	71	0V	
33	0V		72	NC	
34	4.6V	CD	73	0V	
35	5.16V	CD	74, 75	5.14V	
36~41	PS	CD	76~78	0V	
42	PS		79	4.99V	
43	5.15V/ 0V	MUTE ON/ OFF	80	2.56V	
44	NC				

IC504

1	5.13V	TUNER (LW)	60	5.13V
2	5V/ 0V	SEEK LOCAL/ DX	61, 62	PS
3	NC		63	5.02V
4	0V		64~66	NC
5	5.14V		67	5.16V
6	PS/ 0V	MUTE (at Function ON)/ Power ON	68	5.14V
7	5.15V		69, 70	PS
8	5.13V		71	0V
9, 10	NC		72	NC
11~13	PS		73	4.73V
14	0V/ 5.13V	MUTE ON/ OFF	74, 75	5.15V
15~18	PS		76	3.32V
19~32	NC		77	4.75V
33	0V		78	4.65V
34~57	NC		79	5.12V
58	5.12V/ 0V	FM/ AM	80	0V
59	2.1V			

IC502

1	4.83V
2	5.16V
3	0V

IC811

1	PS/ 14.11V	CD/ Power ON
2	0V	CD/ Power ON
3	PS/ 0V	CD/ Power ON
4	0V	CD/ Power ON
5	1.261V/ 0V	CD/ Power ON
6, 7	14V/ 0V	CD/ Power ON
8	PS/ 14.1V	CD/ Power ON

IC821

1, 2	5.14V
3	0V

Q505

1	NC
2	5.12V
3	5.16V
4	5.13V
5	0V

Q506

1	NC	CD/ Power ON
2	8.78V/ 0.64V	CD/ Power ON
3	8.81V/ 8.82V	CD/ Power ON
4	13.98V/ 0V	CD/ Power ON
5	0V/	CD/ Power ON

Q509

1	NC
2	5.09V
3	5.17V
4	4.82V
5	0V

Q801

1	NC	
2	0V/ 5.15V	DISC IN/ OUT
3	5.16V	
4	0V/ 5.15V	DISC IN/ OUT
5	0V	

	E	C	B	MODE
Q501	5.15V/ 4.84V	0V/ 4.82V	5.13V/ 0V	Only BATT/ Power ON
Q502	0V	5.12V/ 0V	0V/ 3.96V	Only BATT/ Power ON
Q503	5.15V	14.08V	5.75V	
Q507	0V	PS/ 13.98V	PS/ 0V	BUZZER ON/ OFF
Q510	14.08V	14V	13.36V	
Q511	0V	0V	4.34V	
Q811	14.04V/ 14.11V	PS/ 0V	PS/ 14.11V	CD/ Power ON
Q812	14.01V/ 14.08V	13.97V/ 0V	0V/ 14.02V	CD/ Power ON
Q813	0V	0V/ 14.02V	5.14V/ 0V	CD/ Power ON
Q883	12.42V/ 13.97V	12.31V/ 0V	11.69V/ 13.95V	P.ANT/ PROTECT CIRCUIT ON
Q884	0V	0V/ 13.97V	7.1V/ 0.67V	P.ANT/ PROTECT CIRCUIT ON
Q885	13.63V/ 13.97V	0.67V/ 13.96V	13.18V/ 13.23V	P.ANT/ PROTECT CIRCUIT ON
Q886	0V	13.08V/ 0V	0.62V/ 9.3V	P.ANT/ PROTECT CIRCUIT ON
Q887	11.14V	14.08V	11.78V	
Q888	0V	11.78V	0.579V	
Q890	11.15V	14.08V	11.78V	

[Measuring Conditions]

- Power Supply Voltage : DC14.4V
- Measuring Meter : Digital Multi Voltmeter
- Measuring Point Reference : Between Ground
- Measuring Conditions : CD : Be playing back the No. 8 Music of the test CD (TDC-782)
  Tuner : FM : 98.1MHz
  AM : 999kHz (MW)

NOTE:

1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. $P = \frac{1}{1,000,000}$

Schematic Diagram (3/5)

IC	IC261 IC291 IC242(1/2) IC271 IC241 IC281 IC242(2/2) IC503 IC301
Transistor (Q)	Q291 Q321 Q322 Q323 Q324 Q325 Q326

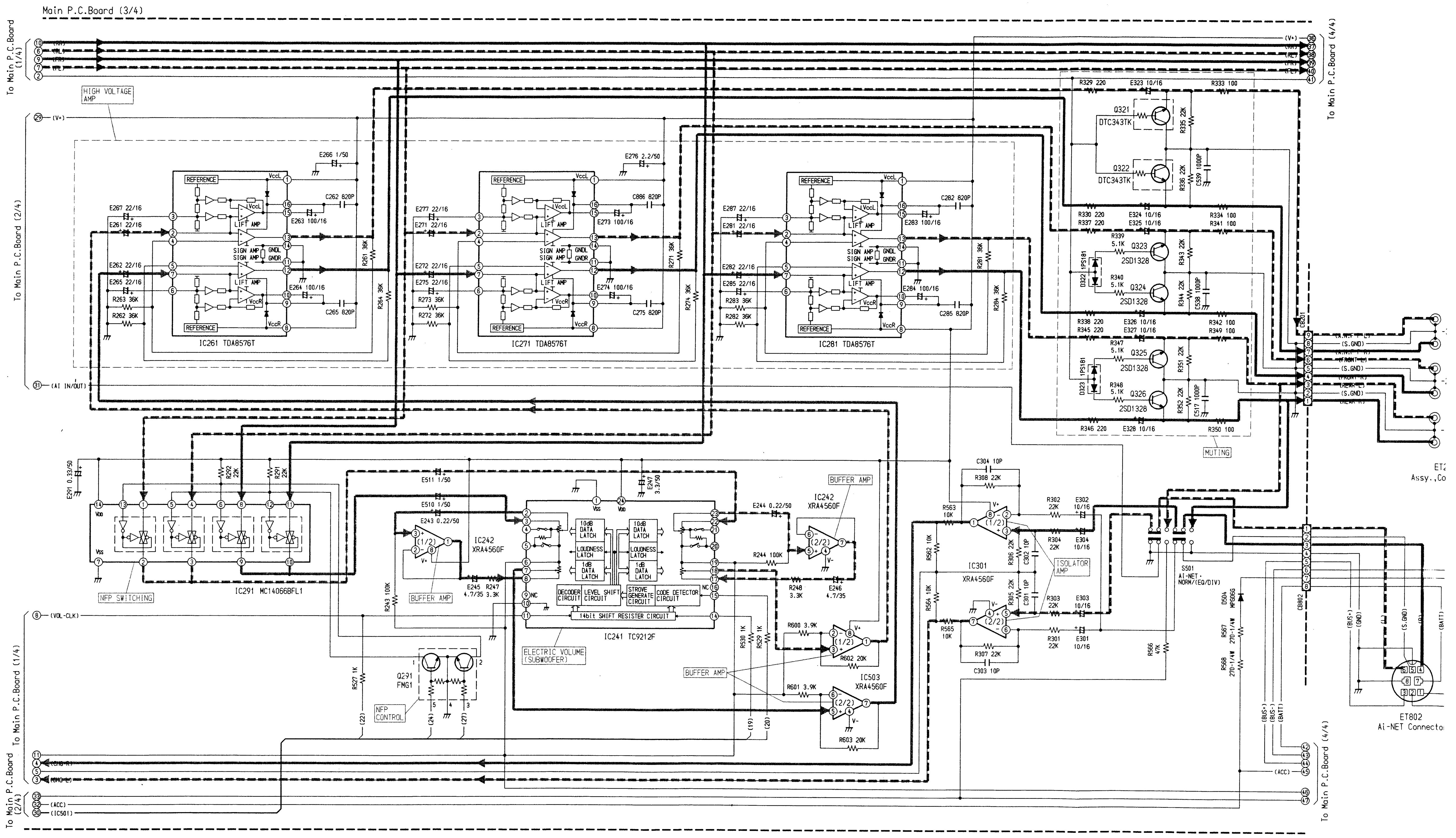
1

2

3

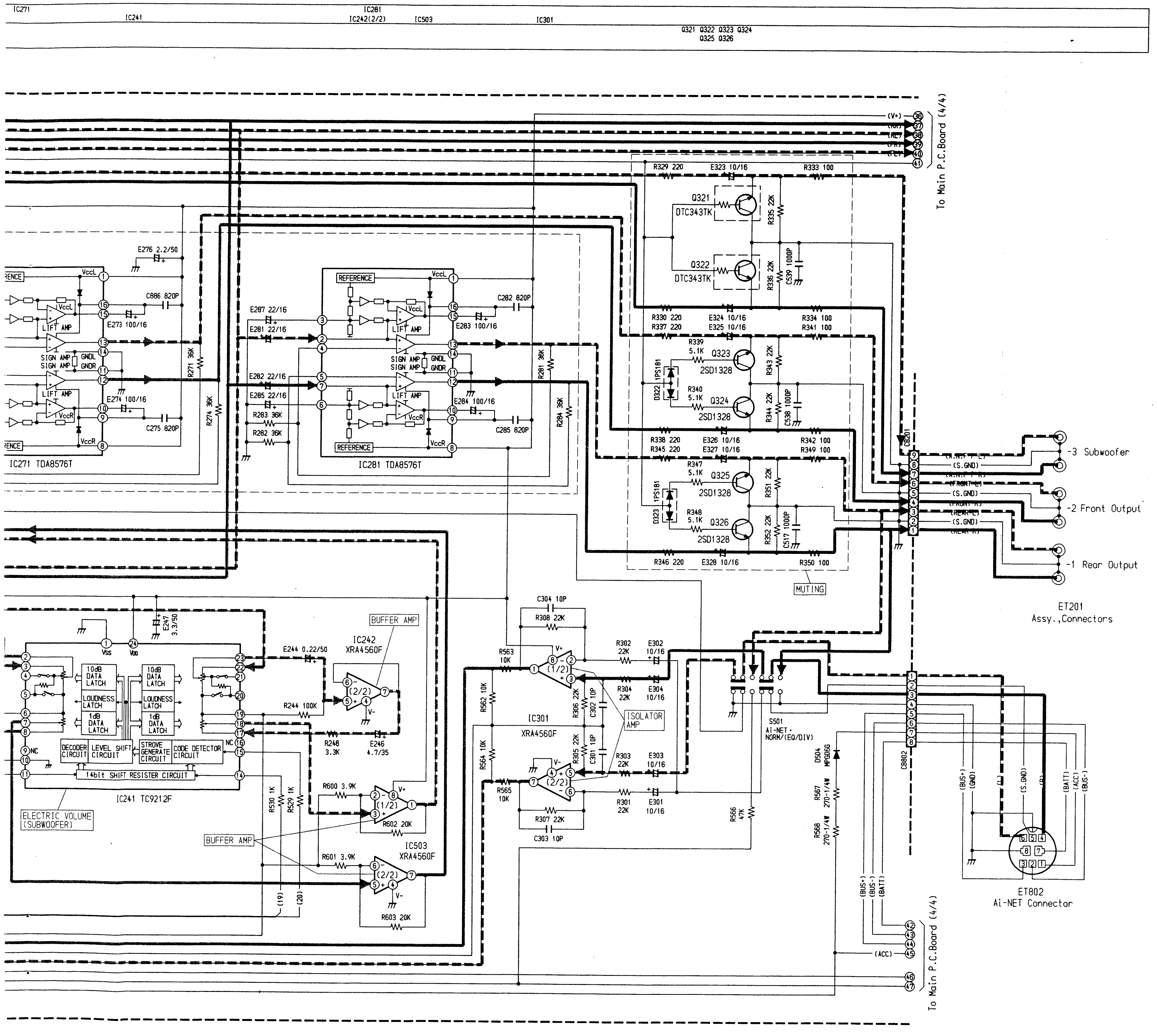
4

5



Main P.C.Board (3/4)
To Main P.C.Board (1/4)
To Main P.C.Board (2/4)
To Main P.C.Board (4/4)
HIGH VOLTAGE AMP
(V+)
(AI IN/OUT)
(VOL-CLK)
(ACC)
(IC501)
REFERENCE
LIFT AMP
SIGN AMP
IC261 TDA8576T
IC271 TDA8576T
IC281 TDA8576T
E266 1/50
E276 2.2/50
C262 820P
C886 820P
C282 820P
C265 820P
C275 820P
C285 820P
E267 22/16
E261 22/16
E262 22/16
E265 22/16
R263 36K
R262 36K
R261 36K
R264 36K
E277 22/16
E271 22/16
E272 22/16
E275 22/16
R273 36K
R272 36K
R271 36K
R274 36K
E287 22/16
E281 22/16
E282 22/16
E285 22/16
R283 36K
R282 36K
R281 36K
R284 36K
E263 100/16
E264 100/16
E273 100/16
E274 100/16
E283 100/16
E284 100/16
Q321 DTC343TK
Q322 DTC343TK
Q323 2SD1328
Q324 2SD1328
Q325 2SD1328
Q326 2SD1328
D322 1PS181
D323 1PS181
R329 220
R330 220
R337 220
R338 220
R345 220
R346 220
R333 100
R334 100
R341 100
R342 100
R349 100
R350 100
E323 10/16
E324 10/16
E325 10/16
E326 10/16
E327 10/16
E328 10/16
R339 5.1K
R340 5.1K
R347 5.1K
R348 5.1K
R335 22K
R336 22K
R343 22K
R344 22K
R351 22K
R352 22K
C539 1000P
C538 1000P
C517 1000P
MUTING
CB201
(S.GND)
(FRONT-L)
(FRONT-R)
(REAR-L)
(REAR-R)
ET2
Assy.,Co
E291 0.33/50
R292 22K
R291 22K
IC291 MC14066BFL1
NFP SWITCHING
E511 1/50
E510 1/50
E243 0.22/50
IC242 XRA4560F
BUFFER AMP
E245 4.7/35
R247 3.3K
R243 100K
E247 3.3/50
10dB DATA LATCH
LOUDNESS LATCH
1dB DATA LATCH
DECODER CIRCUIT
LEVEL SHIFT CIRCUIT
STROVE GENERATE CIRCUIT
CODE DETECTOR CIRCUIT
14bit SHIFT RESISTER CIRCUIT
IC241 TC9212F
ELECTRIC VOLUME (SUBWOOFER)
E244 0.22/50
R244 100K
R248 3.3K
E246 4.7/35
R600 3.9K
R601 3.9K
R602 20K
R603 20K
IC503 XRA4560F
R530 1K
R529 1K
R527 1K
Q291 FMG1
NFP CONTROL
C304 10P
R308 22K
R563 10K
R562 10K
R564 10K
R565 10K
IC301 XRA4560F
R302 22K
R304 22K
R303 22K
R301 22K
E302 10/16
E304 10/16
E303 10/16
E301 10/16
R306 22K
R305 22K
C302 10P
C301 10P
R307 22K
C303 10P
ISOLATOR AMP
R566 47K
S501 Ai-NET-NORM/(EQ/DIV)
D504 MPG06G
R567 270-1/4W
R568 270-1/4W
CB802
(BUS+)
(GND)
(BUS-)
(BATT)
(S.GND)
ET802 Ai-NET Connecto

A | B -33- | C | D | E | F -34- | G | H


IC271
IC241
IC281
IC242(2/2)
IC503
IC301
Q321 Q322 Q323 Q324
Q325 Q326
To Main P.C.Board (4/4)
(V+)
Q321
DTC343TK
Q322
DTC343TK
Q323
2SD1328
Q324
2SD1328
Q325
2SD1328
Q326
2SD1328
MUTING
IC271 TDA8576T
IC281 TDA8576T
REFERENCE
LIFT AMP
SIGN AMP
-3 Subwoofer
-2 Front Output
-1 Rear Output
(S.GND)
ET201
Assy.,Connectors
BUFFER AMP
IC242
XRA4560F
ISOLATOR AMP
IC301
XRA4560F
IC503
XRA4560F
IC241 TC9212F
ELECTRIC VOLUME
(SUBWOOFER)
10dB DATA LATCH
LOUDNESS LATCH
1dB DATA LATCH
DECODER CIRCUIT
LEVEL SHIFT CIRCUIT
STROVE GENERATE CIRCUIT
CODE DETECTOR CIRCUIT
14bit SHIFT RESISTER CIRCUIT
S501
AI-NET ·
NORM(EQ/DIV)
CB802
(BUS+)
(GND)
(S.GND)
(BATT)
(ACC)
(BUS-)
ET802
Ai-NET Connector

IC241

1	0V	12, 13	NC	
2	4.41V	14	5.13V	
3	4.39V	15	5.13V/0V	SUB W ON/OFF
4, 5	NC	16	NC	
6, 7	4.41V	17~19	4.41V	
8	4.4V	20, 21	NC	
9	NC	22	4.4V	
10	0V	23	4.41V	
11	5.13	24	8.78V	

IC242

1, 2	4.44V
3	4.4V
4	0V
5	4.4V
6, 7	4.44V
8	8.82V

IC261

1	8.8V	9	8.13V
2	3.87V	10	2.8V
3	3.86V	11	0V
4	3.85V	12	7.73V
5	3.84V	13	7.67V
6	3.86V	14	0V
7	3.87V	15	2.8V
8	8.8V	16	8.13V

IC301

1	4.43V	S501 IN/OUT
2	4.44V	S501 IN/OUT
3	4.42V	S501 IN/OUT
4	0V	S501 IN/OUT
5	4.42V	S501 IN/OUT
6, 7	4.43V	S501 IN/OUT
8	8.82V	S501 IN/OUT

IC271

1	8.81V	10	2.79V
2	3.87V	11	0V
3	3.86V	12	7.64V
4, 5	3.84V	13	7.67V
6	3.85V	14	0V
7	3.86V	15	2.8V
8	8.81V	16	8.13V
9	8.13V		

IC281

1	8.79V	9	8.12V
2	3.86V	10	2.79V
3	3.85V	11	0V
4	3.84V	12	7.66V
5	3.83V	13	7.68V
6	3.85V	14	0V
7	3.86V	15	2.8V
8	8.79V	16	8.12V

IC291

1~4	4.43V	
5	0V/0V	NFP ON/OFF
6	8.8V/8.8V	NFP ON/OFF
7	0V	
8~10	4.44V	
11	4.43V	
12	0V/0V	NFP ON/OFF
13	8.8V/8.8V	NFP ON/OFF
14	8.82V	

IC503

1~3	4.43V
4	0V
5~7	4.43V
8	8.82V

Q291

1	0V/0V	NFP ON/OFF
2	8.8V/8.79V	NFP ON/OFF
3	0V/0V	NFP ON/OFF
4	0V	
5	5.14V/5.14V	NFP ON/OFF

	E	C	B	MODE
Q321	0V	0V	13.24V/0V	MUTE ON/OFF
Q322	0V	0V	13.24V/0V	MUTE ON/OFF
Q323	0V	0V	0.7V/0V	MUTE ON/OFF
Q324	0V	0V	0.69V/0V	MUTE ON/OFF
Q325	0V	0V	0.7V/0V	MUTE ON/OFF
Q326	0V	0V	0.7V/0V	MUTE ON/OFF

[Measuring Conditions]

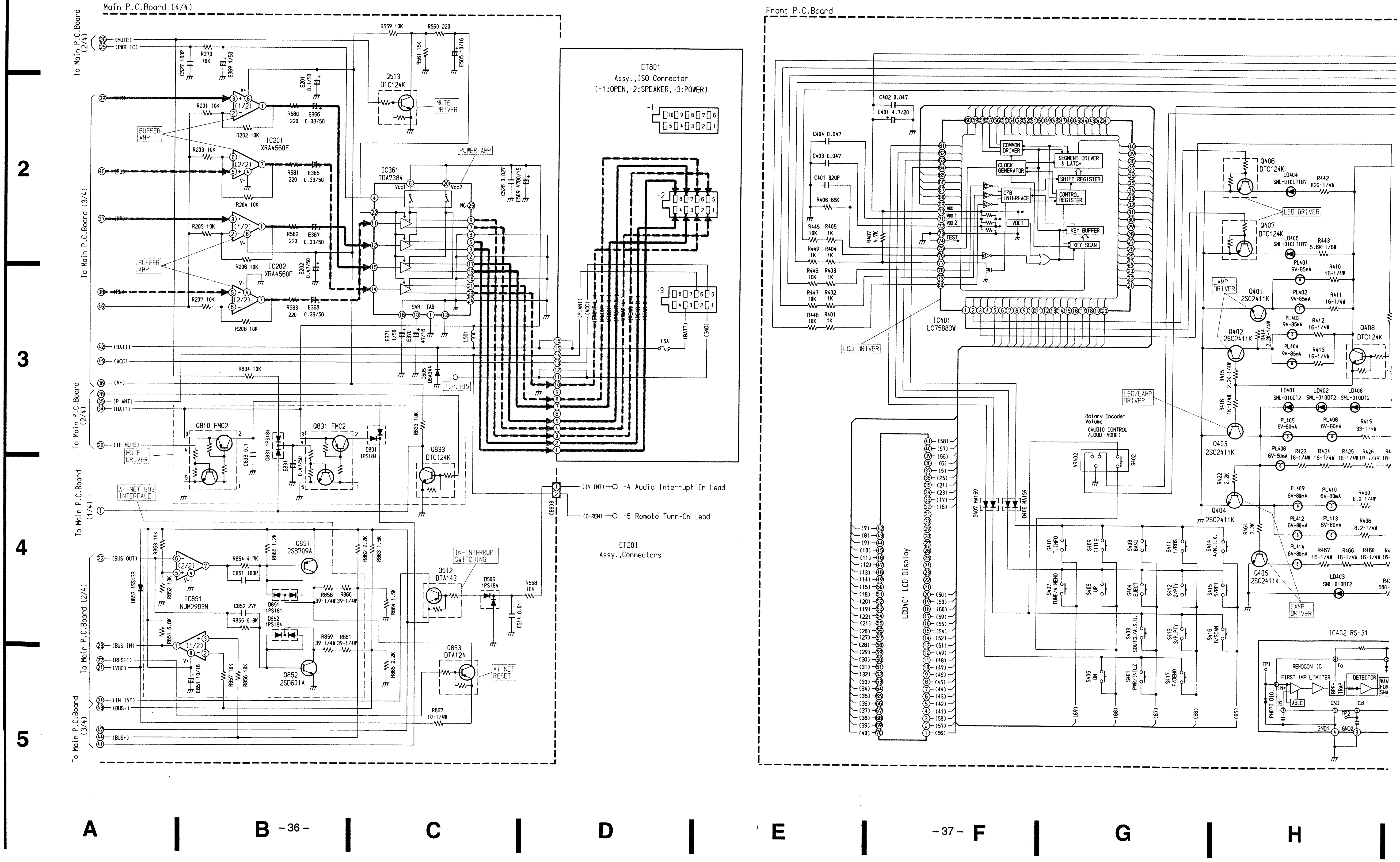
- Power Supply Voltage : DC14.4V
- Measuring Meter : Digital Multi Voltmeter
- Measuring Point Reference : Between Ground
- Measuring Conditions : CD : Be playing back the No. 8 Music of the test CD (TDC-782)

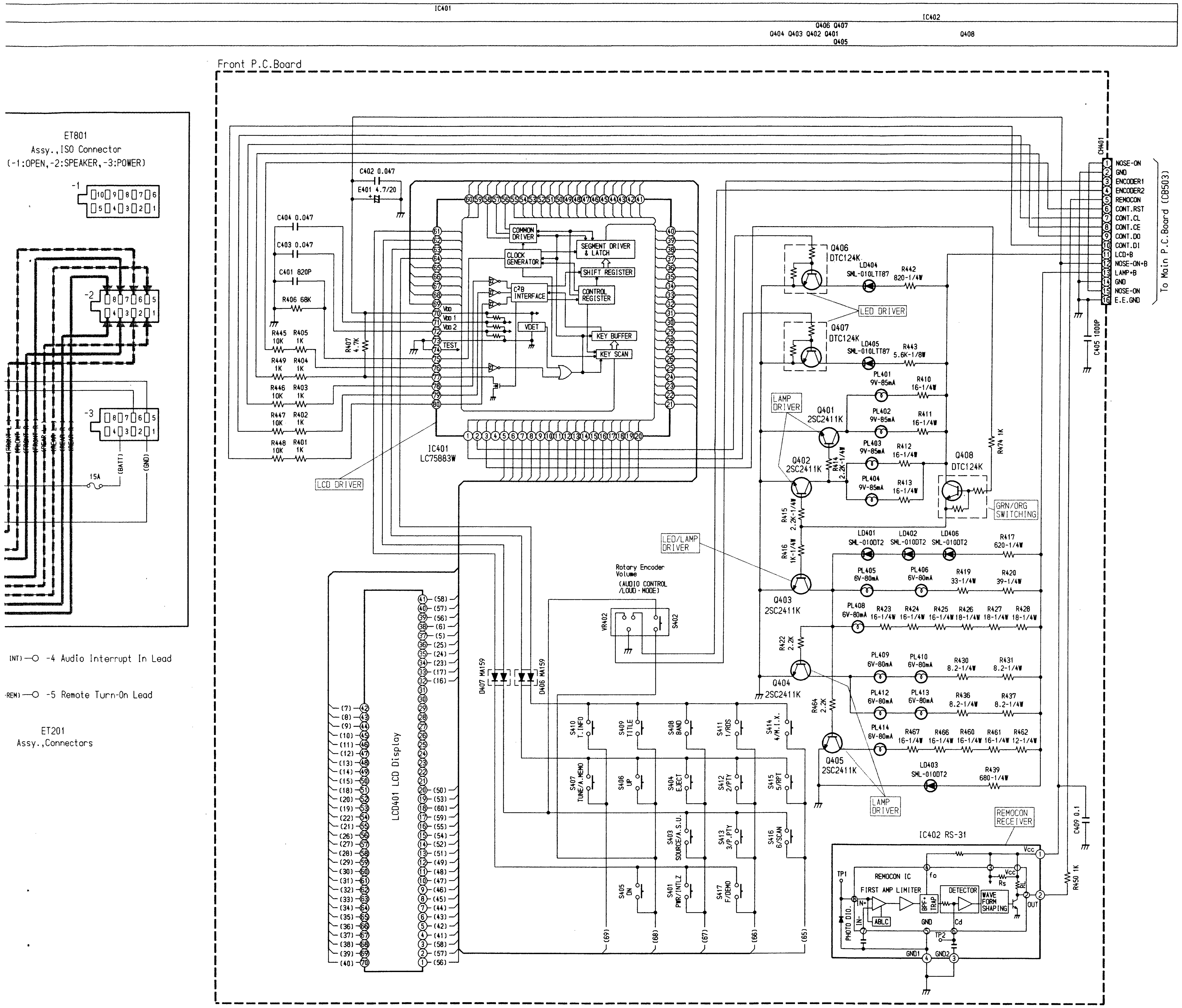
Tuner : FM : 98.1MHz
AM : 999kHz (MW)

NOTE:
1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. $P = \frac{1}{1,000,000}$

Schematic Diagram (4/5)

IC	IC851 IC201 IC202 IC361 IC401 IC402
Transistor (Q)	Q810 Q852 Q851 Q831 Q513 Q833 Q512 Q853 Q404 Q403 Q402 Q401 Q406 Q407 Q405 Q408


1
2
3
4
5
A
B
C
D
E
F
G
H
Main P.C.Board (4/4)
Front P.C.Board
To Main P.C.Board (2/4)
To Main P.C.Board (3/4)
To Main P.C.Board (1/4)
To Main P.C.Board (2/4)
To Main P.C.Board (3/4)
(MUTE)
(PWR IC)
(FR)
(FL)
(RR)
(RL)
(BATT)
(ACC)
(V+)
(P.ANT)
(IF MUTE)
(BUS OUT)
(BUS IN)
(RESET)
(VDD)
(IN INT)
(BUS-)
(BUS+)
BUFFER AMP
IC201 XRA4560F
IC202 XRA4560F
R559 10K
R560 220
R561 15K
E505 10/16
C527 100P
R373 10K
E369 1/50
E201 0.1/50
Q513 DTC124K
MUTE DRIVER
R580 220
E366 0.33/50
R581 220
E365 0.33/50
R582 220
E367 0.33/50
R583 220
E368 0.33/50
POWER AMP
IC361 TDA7384
Vcc1
Vcc2
NC
SVR
TAB
C526 0.027
E509 4700/16
E371 1/50
E370
E372 47/16
L501
D505 DSA3A4
T.P.105
R834 10K
ET801
Assy.,ISO Connector
(-1:OPEN,-2:SPEAKER,-3:POWER)
-1
-2
-3
(P.ANT)
(ACC)
(BATT)
(GND)
15A
Q810 FMC2
Q831 FMC2
C803 0.1
D831 1PS184
E831 0.47/50
D801 1PS184
R833 10K
Q833 DTC124K
MUTE DRIVER
AI-NET BUS INTERFACE
CN803
(IN INT) -4 Audio Interrupt In Lead
(O-REM) -5 Remote Turn-On Lead
ET201
Assy.,Connectors
IC851 NJM2903M
R853 10K
R852 10K
R854 4.7K
C851 100P
C852 27P
R855 6.8K
R851 6.8K
D853 1SS133
E851 10/16
R857 10K
R856 10K
Q851 2SB709A
Q852 2SD601A
D851 1PS181
D852 1PS184
R866 1.2K
R858 39-1/4W
R860 39-1/4W
R859 39-1/4W
R861 39-1/4W
R862 2.2K
R863 1.5K
R864 1.5K
R865 2.2K
IN-INTERRUPT SWITCHING
Q512 DTA143
D506 1PS184
R558 10K
C514 0.01
Q853 DTA124
AI-NET RESET
R867 10-1/4W
C402 0.047
E401 4.7/20
C404 0.047
C403 0.047
C401 820P
R406 68K
R407 4.7K
R445 10K
R405 1K
R449 1K
R404 1K
R446 10K
R403 1K
R447 10K
R402 1K
R448 10K
R401 1K
COMMON DRIVER
CLOCK GENERATOR
SEGMENT DRIVER & LATCH
SHIFT REGISTER
C2B INTERFACE
CONTROL REGISTER
VDET
KEY BUFFER
KEY SCAN
TEST
IC401 LC75883W
LCD DRIVER
LCD401 LCD Display
Q406 DTC124K
LD404 SML-010LT87
R442 820-1/4W
LED DRIVER
Q407 DTC124K
LD405 SML-010LT87
R443 5.6K-1/8W
LAMP DRIVER
Q401 2SC2411K
Q402 2SC2411K
R414 2.2K
PL401 9V-85mA
PL402 9V-85mA
PL403 9V-85mA
PL404 9V-85mA
R410 16-1/4W
R411 16-1/4W
R412 16-1/4W
R413 16-1/4W
Q408 DTC124K
R415 2.2K-1/4W
R416 1K-1/4W
LED/LAMP DRIVER
LD401 SML-010DT2
LD402 SML-010DT2
LD406 SML-010DT2
PL405 6V-80mA
PL406 6V-80mA
R419 33-1/4W
Q403 2SC2411K
PL408 6V-80mA
R423 16-1/4W
R424 16-1/4W
R425 16-1/4W
R422 2.2K
PL409 6V-80mA
PL410 6V-80mA
R430 8.2-1/4W
Q404 2SC2411K
PL412 6V-80mA
PL413 6V-80mA
R436 8.2-1/4W
R464 2.2K
PL414 6V-80mA
R467 16-1/4W
R466 16-1/4W
R460 16-1/4W
Q405 2SC2411K
LD403 SML-010DT2
LAMP DRIVER
Rotary Encoder Volume
(AUDIO CONTROL /LOUD-MODE)
VR402
S402
D407 MA159
D406 MA159
S410 T.INFO
S409 TITLE
S408 BAND
S411 1/RDS
S414 4/K.I.X.
S407 TUNE/A.MEMO
S406 UP
S404 EJECT
S412 2/PTY
S415 5/RPT
S403 SOURCE/A.S.U.
S413 3/P.PTY
S416 6/SCAN
S405 DN
S401 PWR/INTLZ
S417 F/DEMO
IC402 RS-31
TP1
TP2
PHOTO DIO.
REMOCON IC
FIRST AMP LIMITER
ABLC
BPF+TRAP
DETECTOR
fo
GND
Cd
GND1
GND2


IC401
IC402
Q406 Q407
Q404 Q403 Q402 Q401
Q405
Q408
Front P.C.Board
ET801
Assy.,ISO Connector
(-1:OPEN,-2:SPEAKER,-3:POWER)
-1
-2
-3
15A
(BATT)
(GND)
INT) -4 Audio Interrupt In Lead
REM) -5 Remote Turn-On Lead
ET201
Assy.,Connectors
C402 0.047
E401 4.7/20
C404 0.047
C403 0.047
C401 820P
R406 68K
R445 10K
R405 1K
R449 1K
R404 1K
R446 10K
R403 1K
R447 10K
R402 1K
R448 10K
R401 1K
R407 4.7K
COMMON DRIVER
SEGMENT DRIVER & LATCH
CLOCK GENERATOR
SHIFT REGISTER
CCB INTERFACE
CONTROL REGISTER
VDET
KEY BUFFER
KEY SCAN
VDD
VDD 1
VDD 2
TEST
IC401
LC75883W
LCD DRIVER
LCD401 LCD Display
Q406
DTC124K
LD404
SML-010LT87
R442 820-1/4W
LED DRIVER
Q407
DTC124K
LD405
SML-010LT87
R443 5.6K-1/8W
LAMP DRIVER
Q401
2SC2411K
PL401 9V-85mA
R410 16-1/4W
PL402 9V-85mA
R411 16-1/4W
PL403 9V-85mA
R412 16-1/4W
PL404 9V-85mA
R413 16-1/4W
R414 2.2K-1/4W
Q402
2SC2411K
Q408
DTC124K
R474 1K
GRN/ORG SWITCHING
R415 2.2K-1/4W
R416 1K-1/4W
LD401 SML-010DT2
LD402 SML-010DT2
LD406 SML-010DT2
R417 620-1/4W
LED/LAMP DRIVER
PL405 6V-80mA
PL406 6V-80mA
R419 33-1/4W
R420 39-1/4W
Q403
2SC2411K
PL408 6V-80mA
R423 16-1/4W
R424 16-1/4W
R425 16-1/4W
R426 18-1/4W
R427 18-1/4W
R428 18-1/4W
R422 2.2K
Rotary Encoder Volume
(AUDIO CONTROL /LOUD - MODE)
VR402
S402
PL409 6V-80mA
PL410 6V-80mA
R430 8.2-1/4W
R431 8.2-1/4W
Q404
2SC2411K
PL412 6V-80mA
PL413 6V-80mA
R436 8.2-1/4W
R437 8.2-1/4W
R464 2.2K
PL414 6V-80mA
R467 16-1/4W
R466 16-1/4W
R460 16-1/4W
R461 16-1/4W
R462 12-1/4W
Q405
2SC2411K
LD403 SML-010DT2
R439 680-1/4W
LAMP DRIVER
D407 MA159
D406 MA159
S410 T.INFO
S409 TITLE
S408 BAND
S411 1/RDS
S414 4/M.I.X.
S407 TUNE/A.MEMO
S406 UP
S404 EJECT
S412 2/PTY
S415 5/RPT
S403 SOURCE/A.S.U.
S413 3/P.PTY
S416 6/SCAN
S405 DN
S401 PWR/INTLZ
S417 F/DEMO
REMOCON RECEIVER
IC402 RS-31
TP1
REMOCON IC
FIRST AMP LIMITER
DETECTOR
ABLC
BPF TRAP
WAVE FORM SHAPING
PHOTO DIO.
fo
Vcc
Rs
OUT
GND
Cd
TP2
GND1
GND2
R450 1K
C409 0.1
C405 1000P
CN401
NOSE-ON
GND
ENCODER1
ENCODER2
REMOCON
CONT.RST
CONT.CL
CONT.CE
CONT.DO
CONT.DI
LCD+B
NOSE-ON+B
LAMP+B
GND
NOSE-ON
E.E.GND
To Main P.C.Board (CB503)

IC201

1, 2	4.44V
3	4.43V
4	0V
5~7	4.43V
8	8.82V

IC202

1~3	4.43V
4	0V
5~7	4.43V
8	8.82V

IC361

1, 2	0V	15	7.08V
3	7.26V	16	7.14V
4	5.15V	17	7.21V
5	7.25V	18	0V
6	14.14V	19	7.2V
7	7.21V	20	14.14V
8	0V	21	7.2V
9	7.23V	22	5.29V
10	7.18V	23	7.22V
11, 12	7.08V	24	0V
13	0V	25	NC
14	7.1V		

IC401

1	5.07V/ 2.5V	LD405 ON/ OFF
2	5.07V/ 0V	LD404 ON/ OFF
3	0V/ 5.06V	GRN/ AMB
4	NC	
5~61	PS	
62~64	5.11V	
65~69	PS	
70	5.12V	
71	3.4V	
72	1.74V	
73, 74	0V	
75~80	PS	

IC402

1	5.12V
2	PS
3, 4	0V

IC851

1	0V	Power ON
2	3.06V	
3	2.03V	
4	0V	
5	2.54V	
6	0V	Power ON
7, 8	5.08V	

Q810

1	NC	MUTE ON/ OFF
2	2.19V/ 0V	MUTE ON/ OFF
3	14.14V/ 14.14V	MUTE ON/ OFF
4	0V/ 0V	MUTE ON/ OFF
5	0V	

Q831

1	NC	MUTE ON/ OFF
2	14.14V/ 0V	MUTE ON/ OFF
3	14.14V/ 14.14V	MUTE ON/ OFF
4	3.37V/ 0V	MUTE ON/ OFF
5	0V	

	E	C	B	MODE
Q401	0V	0V/ 10.03V	0.805V/ 0.278V	GRN/ AMB
Q402	0V	9.96V/ 0V	0V/ 5.06V	GRN/ AMB
Q403	0V	10.66V/ 0V	0V/ 0.801V	GRN/ AMB
Q404	0V	0V/ 12.23V	0.8V/ 0V	GRN/ AMB
Q405	0V	0V/ 12.24V	0.768V/ 0V	GRN/ AMB
Q406	0V	0V/ 9.2V	5.07V/ 0V	LD404 ON/ OFF
Q407	0V	0V/ 4.51V	5.07V/ 2.5V	LD405 ON/ OFF
Q408	0V/ 3.82V	10.03V/ 10.04V	0V/ 5.07V	GRN/ AMB
Q512	5.08V	0V	5.08V	
Q513	0V	0V/ 5.29V	0V	MUTE ON/ OFF
Q833	0V	0V	3.98V	
Q851	5.09V	2.03V	5.09V	
Q852	0V	3.07V	0V	
Q853	5.08V	2.03V	5.15V	

[Measuring Conditions]

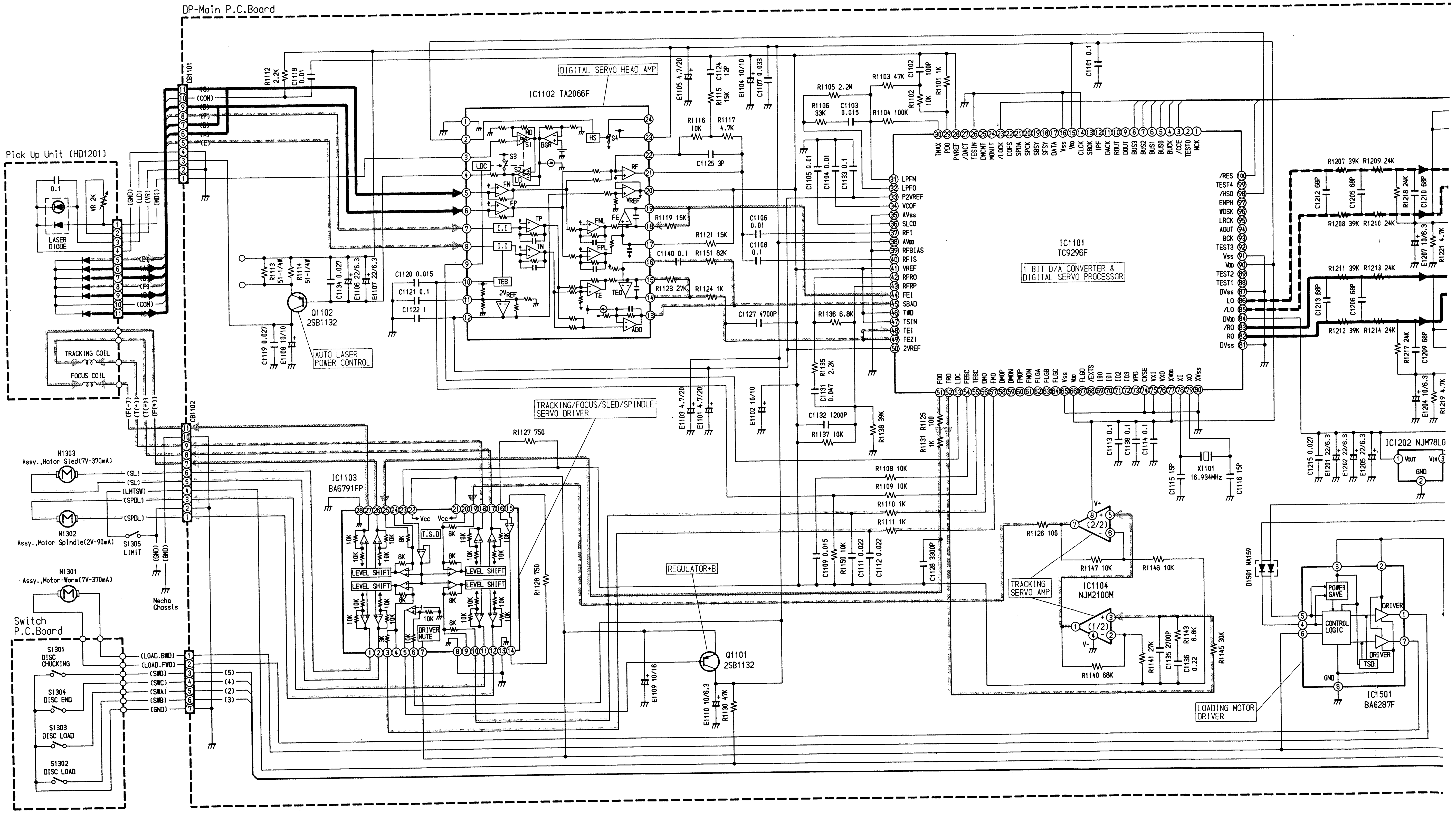
- Power Supply Voltage : DC14.4V
- Measuring Meter : Digital Multi Voltmeter
- Measuring Point Reference : Between Ground
- Measuring Conditions : CD : Be playing back the No. 8 Music of the test CD (TDC-782)
  Tuner : FM : 98.1MHz
  AM : 999kHz (MW)

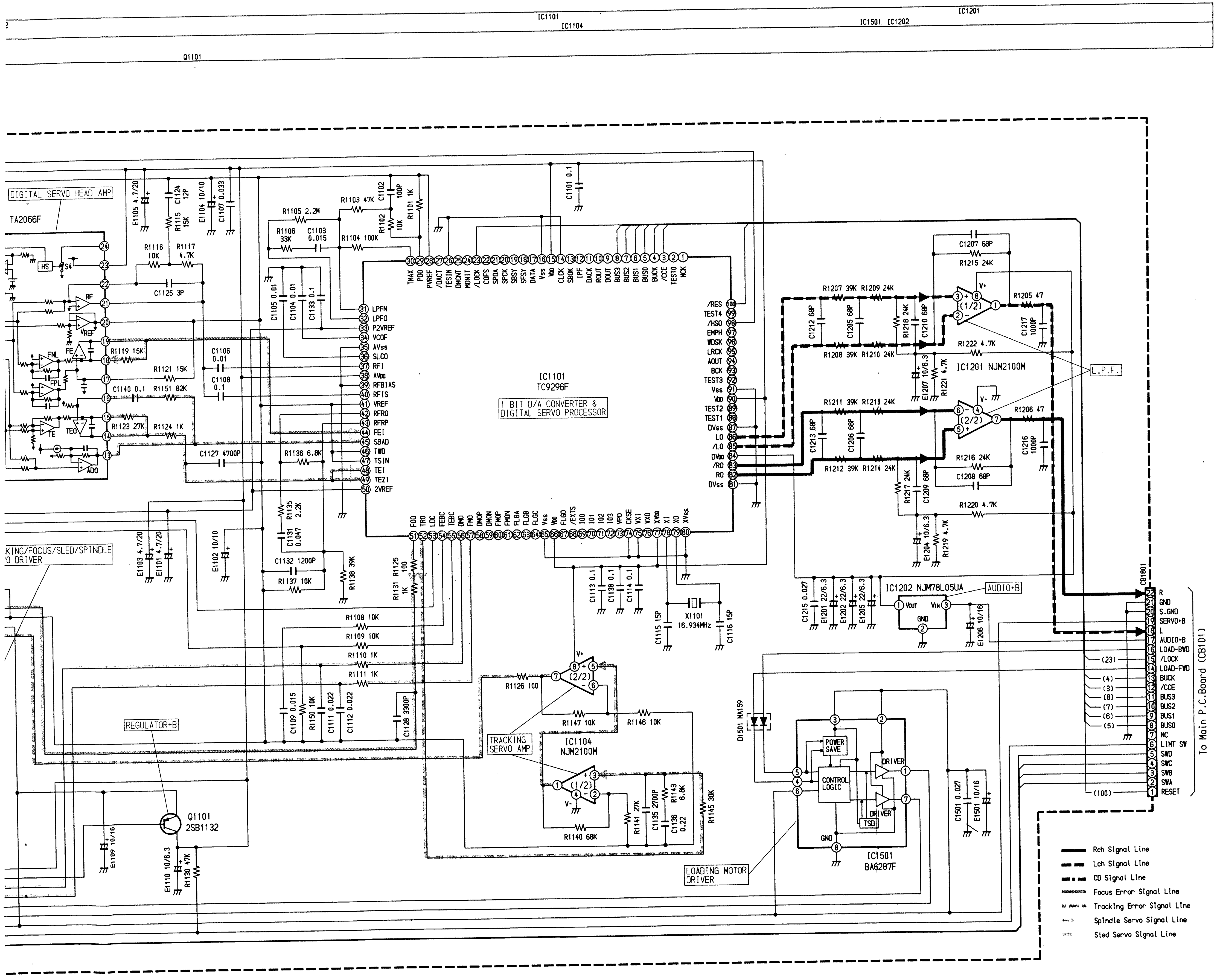
NOTE:

1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. $P = \frac{1}{1,000,000}$

Schematic Diagram (5/5)

IC	IC1103 IC1102 IC1101 IC1104 IC1501 IC1202
Transistor (Q)	Q1102 Q1101


1
2
3
4
5
DP-Main P.C.Board
Pick Up Unit (HD1201)
LASER DIODE
VR 2K
TRACKING COIL
FOCUS COIL
CB1101
CB1102
(GND)
(LD)
(VR)
(MDI)
(COM)
(E)
(F)
(F(-))
(T(-))
(T(+))
(F(+))
DIGITAL SERVO HEAD AMP
IC1102 TA2066F
AUTO LASER POWER CONTROL
Q1102 2SB1132
R1112 2.2K
C1118 0.01
R1113 51-1/4W
R1114 51-1/4W
C1134 0.027
E1106 22/6.3
E1107 22/6.3
C1119 0.027
E1108 10/10
C1120 0.015
C1121 0.1
C1122 1
E1105 4.7/20
C1124 12P
R1115 15K
E1104 10/10
C1107 0.033
R1116 10K
R1117 4.7K
C1125 3P
R1119 15K
R1121 15K
C1106 0.01
C1108 0.1
C1140 0.1
R1151 82K
R1123 27K
R1124 1K
C1127 4700P
R1105 2.2M
R1106 33K
C1103 0.015
R1103 47K
C1102 100P
R1101 1K
R1102 10K
R1104 100K
C1105 0.01
C1104 0.01
C1133 0.1
R1136 6.8K
R1135 2.2K
C1131 0.047
C1132 1200P
R1137 10K
R1138 39K
R1131 1K
R1125 100
E1103 4.7/20
E1101 4.7/20
E1102 10/10
C1101 0.1
IC1101 TC9296F
1 BIT D/A CONVERTER & DIGITAL SERVO PROCESSOR
LPFN LPFO P2VREF VCOF AVss SLCO RFI AVDD RFBIAS RFIS VREF RFRO RFRP FEI SBAD TWD TSIN TEI TEZI 2VREF
/RES TEST4 /HSO EMPH WDSK LRCK AOUT BCK TEST3 Vss VDD TEST2 TEST1 DVss LO /LO DVDD /RO RO DVss
TMAX PDO PVREF /DACT TESTIN DMONIT MONIT /LOCK CDFS SPDA SPCK SBSY SFSY DATA Vss VDD CLK SBOK IPF DACK ROUT DOUT BUS3 BUS2 BUS1 BUS0 BUCK /CCE TESTO MCK
FOO TRO LDC FEBC TEBC DMO PMO DMON DMOP FMOP FMON FLGA FLGB FLGC Vss VDD FLGD /EXTS IO0 IO1 IO2 IO3 VPD CKSE VX1 VXO VDD XI XO XVss
C1113 0.1
C1138 0.1
C1114 0.1
C1115 15P
X1101 16.934MHz
C1116 15P
M1303 Assy.,Motor Sled(7V-370mA)
M1302 Assy.,Motor Spindle(2V-90mA)
M1301 Assy.,Motor-Worm(7V-370mA)
S1305 LIMIT
Mecha Chassis
(SL)
(LMTSW)
(SPDL)
TRACKING/FOCUS/SLED/SPINDLE SERVO DRIVER
IC1103 BA6791FP
R1127 750
R1128 750
LEVEL SHIFT
T.S.D
DRIVER MUTE
Vcc
REGULATOR+B
Q1101 2SB1132
E1109 10/16
E1110 10/6.3
R1130 47K
R1108 10K
R1109 10K
R1110 1K
R1111 1K
C1109 0.015
R1150 10K
C1111 0.022
C1112 0.022
C1128 3300P
R1126 100
R1147 10K
R1146 10K
TRACKING SERVO AMP
IC1104 NJM2100M
R1140 68K
R1141 27K
C1135 2700P
C1136 0.22
R1143 6.8K
R1145 30K
Switch P.C.Board
S1301 DISC CHUCKING
S1304 DISC END
S1303 DISC LOAD
S1302 DISC LOAD
(LOAD.BWD)
(LOAD.FWD)
(SWD)
(SWC)
(SWA)
(SWB)
(GND)
R1207 39K
R1209 24K
C1212 68P
C1205 68P
R1218 24K
C1210 68P
R1208 39K
R1210 24K
E1207 10/6.3
R1221 4.7K
R1211 39K
R1213 24K
C1213 68P
C1206 68P
R1212 39K
R1214 24K
R1217 24K
C1209 68P
E1204 10/6.3
R1219 4.7K
C1215 0.027
E1201 22/6.3
E1202 22/6.3
E1205 22/6.3
IC1202 NJM78L0
VOUT VIN GND
D1501 MA159
POWER SAVE
CONTROL LOGIC
DRIVER
TSD
GND
IC1501 BA6287F
LOADING MOTOR DRIVER
A
B
C
D
E
F
G
H


IC1101
IC1104
IC1501 IC1202
IC1201
Q1101
DIGITAL SERVO HEAD AMP
TA2066F
IC1101
TC9296F
1 BIT D/A CONVERTER &
DIGITAL SERVO PROCESSOR
IC1201 NJM2100M
L.P.F.
IC1202 NJM78L05UA
AUDIO+B
TRACKING SERVO AMP
IC1104
NJM2100M
REGULATOR+B
Q1101
2SB1132
LOADING MOTOR DRIVER
IC1501
BA6287F
POWER SAVE
CONTROL LOGIC
DRIVER
TSD
D1501 MA159
X1101
16.934MHz
CB1801
R
GND
S.GND
SERVO+B
L
AUDIO+B
LOAD-BWD
/LOCK
LOAD-FWD
BUCK
/CCE
BUS3
BUS2
BUS1
BUS0
NC
LIMT SW
SWD
SWC
SWB
SWA
RESET
To Main P.C.Board (CB1101)
Rch Signal Line
Lch Signal Line
CD Signal Line
Focus Error Signal Line
Tracking Error Signal Line
Spindle Servo Signal Line
Sled Servo Signal Line

IC1101

1	NC	33	4.3V	52	2.2V	83	2.5V
2	NC	34	1.2V	53	5V	84	5V
3~8	PS	35	0V	54~57	PS	85	2.5V
9~13	NC	36	2.2V	58~64	NC	86	2.5V
14	0V	37	0V	65	0V	87	0V
15	5V	38	5V	66	5V	88	NC
16	0V	39	0V	67~73	NC	89	NC
17~22	NC	40	PS	74	0V	90	5V
23	0V	41	2.2V	75	0V	91	0V
24	NC	42	3.6V	76	NC	92~97	NC
25	NC	43	2.8V	77	5V	98	5V
26	0V	44	2.2V	78	PS	99	NC
27	NC	45	0V	79	PS	100	5V
28	2.1V	46~49	2.2V	80	0V		
29	PS	50	4.3V	81	0V		
30~32	2.1V	51	2.1V	82	2.5V		

IC1102

1	0V	13	2.7V
2	5V	14	2.2V
3	0.2V	15	2.2V
4	3.3V	16	2.2V
5	2.2V	17	2.4V
6	2.2V	18	2.4V
7	2V	19	2.3V
8	2V	20	2.2V
9	5V	21	PS
10	2.2V	22	2.2V
11	2.2V	23	5V
12	4.3V	24	NC

IC1103

1	3.8V	15	2.2V
2	3.6V	16	2.2V
3	2.2V	17	3.5V
4	NC	18	2.2V
5	6.4V	19	2.2V
6	5V	20	NC
7	7.1V	21	7.1V
8	0V	22	7.1V
9	NC	23	2.2V
10	2.6V	24	NC
11	4.5V	25	2.1V
12	2.7V	26	3.4V
13	0V	27	3.8V
14	2.2V	28	0V

IC1104

1	2.2V
2	2.2V
3	2.2V
4	0V
5	2.2V
6	2.2V
7	2.2V
8	5V

IC1201

1	2.5V
2	2.5V
3	2.5V
4	0V
5	2.5V
6	2.5V
7	2.5V
8	5V

IC1202

1	5V
2	0V
3	8.8V

IC1501

1	0V
2	7.1V
3	7.1V
4	0V
5	0V
6	7.1V
7	0V
8	0V

	E	C	B
Q1101	7.1V	5V	6.4V
Q1102	3.9V	1.8V	3.2V

[Measuring Conditions]

- Power Supply Voltage : DC14.4V
- Measuring Meter : Digital Multi Voltmeter
- Measuring Point Reference : Between Ground
- Measuring Conditions : CD : Be playing back the No. 8 Music of the test CD (TDC-782)

Tuner : FM : 98.1MHz
AM : 999kHz (MW)

NOTE:

1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. $P = \frac{1}{1,000,000}$

Electrical Parts List

Resistor : Carbon resistors under 1/4 watts are not mentioned in the parts list, please confirm them by schematic diagram.
Capacitor : „F=microfarads,pF=picofarads

Abbreviations
RES.= Resistor CAP.= Capacitor
C.F.= Carbon Film ELY.= Electrolytic
M.F.= Metal Film CER.= Ceramic
M.O.= Metal Oxide Film MYL.= Mylar
M.P.= Metal Plate TAN.= Tantalum
TR. = Transistor POLY.= Polystyrol
TRANS.= Transformer PP. = Polypropylene
CP. = Chip PLT.= Polyethylene
PF. = Polyester Film

Main P.C.Board

IC's

Symbol No.	Part No.	Description
IC001	51T93336F01	NJM4558M
IC002	51T40941U03	MC14066BFL1
IC003	51T55054W02	SAA6579T
IC004	51T35504W02	LC7219
IC005	51T93336F01	NJM4558M
IC006	51T67915F01	M51143AL
IC201	51T92001F21	XRA4560F
IC202	51T92001F21	XRA4560F
IC221	51T65131W01	TEA6320T
IC222	51T92001F21	XRA4560F
IC241	51T75584W01	TC9212F
IC242	51T92001F21	XRA4560F
IC261	51T75464W01	TDA8576T
IC271	51T75464W01	TDA8576T
IC281	51T75464W01	TDA8576T
IC291	51T40941U03	MC14066BFL1
IC301	51T92001F21	XRA4560F
IC361	51T85153W01	TDA7384
IC501	51T75099W38	75099W38
IC502	51T95014F09	S-8054ALR-LN
IC503	51T92001F21	XRA4560F
IC504	51T85088W01	85088W01
IC811	51T15510W01	MC34063AML
IC821	51T95014F13	S-8052HNM-CR
IC841	51T92001F21	XRA4560F
IC851	51T93332F01	NJM2903M

Transistors

Symbol No.	Part No.	Description
Q001	48T62967F03	CP., DTC124K
or	48T64222F02	CP., UN2212
Q002	48T73888F08	CP., FMG1
Q003	48T73888F08	CP., FMG1
Q004	48T73888F08	CP., FMG1
Q005	48T62967F03	CP., DTC124K
or	48T64222F02	CP., UN2212
Q006	48T73888F08	CP., FMG1
Q007	48T93828F04	2SD1994A
Q008	48T92368F04	CP., 2SD1760
Q009	48T84234F03	2SB1238
Q010	48T84234F03	2SB1238
Q011	48T63420F01	CP., 2SA1037K
Q012	48T62967F03	CP., DTC124K
or	48T64222F02	CP., UN2212
Q013	48T63420F01	CP., 2SA1037K
Q014	48T63417F01	CP., 2SC2412K
Q015	48T52438F01	CP., 2SD601A
or	48T75616W01	CP., 2PD601A
Q201	48T93828F04	2SD1994A
Q202	48T93828F04	2SD1994A
Q203	48T62967F23	CP., DTC143TK
Q204	48T62967F23	CP., DTC143TK
Q205	48T62967F23	CP., DTC143TK
Q291	48T73888F08	CP., FMG1
Q321	48T62967F33	CP., DTC343TK
Q322	48T62967F33	CP., DTC343TK
Q323	48T63788F04	CP., 2SD1328
Q324	48T63788F04	CP., 2SD1328
Q325	48T63788F04	CP., 2SD1328
Q326	48T63788F04	CP., 2SD1328
Q501	48T62966F03	CP., DTA124
or	48T64221F02	CP., UN2112
Q502	48T62967F09	CP., DTC114TK
Q503	48T93828F04	2SD1994A
Q505	48T73888F13	CP., FMC3
Q506	48T73888F13	CP., FMC3
Q507	48T62967F03	CP., DTC124K
or	48T64222F02	CP., UN2212
Q509	48T73888F12	CP., FMC2
Q510	48T84366F04	2SB1243
Q511	48T62967F05	CP., DTC143XK
Q512	48T62966F01	CP., DTA143
Q513	48T62967F03	CP., DTC124K
or	48T64222F02	CP., UN2212
Q801	48T73888F12	CP., FMC2
Q810	48T73888F12	CP., FMC2
Q811	48T15511W02	CP., 2SB1261
or	48T85460W01	CP., 2SA1385Z
Q812	48T62966F03	CP., DTA124
or	48T64221F02	CP., UN2112
Q813	48T62967F03	CP., DTC124K
or	48T64222F02	CP., UN2212
Q831	48T73888F12	CP., FMC2
Q833	48T62967F03	CP., DTC124K
or	48T64222F02	CP., UN2212
Q851	48T52437F01	CP., 2SB709A
Q852	48T52438F01	CP., 2SD601A
Q853	48T62966F03	CP., DTA124
or	48T64221F02	CP., UN2112
Q883	48T84366F04	2SB1243
Q884	48T62967F02	CP., DTC114K
Q885	48T63420F01	CP., 2SA1037K
Q886	48T62967F03	CP., DTC124K
or	48T64222F02	CP., UN2212
Q887	48T93828F04	2SD1994A
Q888	48T52438F01	CP., 2SD601A
or	48T75616W01	CP., 2PD601A
Q890	48T93828F04	2SD1994A
Q891	48T62967F03	CP., DTC124K
or	48T64222F02	CP., UN2212

Diodes

Symbol No.	Part No.	Description
D001	48T85356W01	CP., 1PS184
or	48T63462F01	CP., DAN202K
or	48T52446F01	CP., MA151WK
D002	48T85356W01	CP., 1PS184
or	48T63462F01	CP., DAN202K
or	48T52446F01	CP., MA151WK
D003	48T68828F11	1SS133
D322	48T85355W01	CP., 1PS181
or	48T63463F01	CP., DAP202K
D323	48T85355W01	CP., 1PS181
or	48T63463F01	CP., DAP202K
D501	48T68828F11	1SS133
D502	48T85356W01	CP., 1PS184
or	48T63462F01	CP., DAN202K
or	48T52446F01	CP., MA151WK
D504	48T85270W02	MPG06G
D505	48T68580F02	DSA3A4
D506	48T85356W01	CP., 1PS184
or	48T63462F01	CP., DAN202K
or	48T52446F01	CP., MA151WK
D801	48T85356W01	CP., 1PS184
or	48T63462F01	CP., DAN202K
or	48T52446F01	CP., MA151WK
D811	48T85269W02	SB040
D821	48T68828F11	1SS133
D831	48T85356W01	CP., 1PS184
or	48T63462F01	CP., DAN202K
or	48T52446F01	CP., MA151WK
D851	48T85355W01	CP., 1PS181
or	48T63463F01	CP., DAP202K
D852	48T85356W01	CP., 1PS184
or	48T63462F01	CP., DAN202K
or	48T52446F01	CP., MA151WK
D853	48T68828F11	1SS133
D881	48T85270W02	MPG06G
D882	48T85357W01	CP., 1PS226
or	48T64134F01	CP., DA204K
ZD001	48T25766W24	Zener., HZS9C1L
ZD002	48T25766W51	Zener., HZS181L
ZD003	48T25766W01	Zener., HZS6A1L
ZD201	48T25766W24	Zener., HZS9C1L
ZD501	48T25766W18	Zener., HZS7C3L
ZD502	48T25766W04	Zener., HZS6B1L
ZD882	48T25766W25	Zener., HZS9C2L

Coils

Symbol No.	Part No.	Description
L001	24T25798W13	Inductor, 1mH
L501	24T75055W06	Choke
L502	24T65110W16	Inductor, CP. 1μH
L503	24T65110W16	Inductor, CP. 1μH
L504	24T65110W16	Inductor, CP. 1μH
L811	24T16271W13	Inductor, 220μH

Crystals

Symbol No.	Part No.	Description
X001	91T85169W43	7.2MHz
X002	91T45118W18	4.332MHz
X501	91T85169W17	4.1943MHz
X502	91T85169W27	4.9152MHz

Switches

Symbol No.	Part No.	Description
S501	40T45282W01	Slide, SLD-42-508 (Ai-NET•NORM/[EQ/DIV])
S821	40T16096W03	Tact, SKHHLW (RESET)

Buzzer

Symbol No.	Part No.	Description
BZ501	50T85541W01	CD11PA-XZ

Symbol No.
Filter
BPF00
Surg
DSP00
Ther
Capa
C001
E001
C002
E002
C003
C004
E004
C005
E005
C006
E006
E007
C008
E008
C009
E009
C010
E010
C011
E011
C012
E012
C013
C014
E014
C015
E015
C016
E016
C017
E017
C018

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Symbol No.	Part No.	Description
Q813	48T62967F03	CP., DTC124K
or	48T64222F02	CP., UN2212
Q831	48T73888F12	CP., FMC2
Q833	48T62967F03	CP., DTC124K
or	48T64222F02	CP., UN2212
Q851	48T52437F01	CP., 2SB709A
Q852	48T52438F01	CP., 2SD601A
Q853	48T62966F03	CP., DTA124
or	48T64221F02	CP., UN2112
Q883	48T84366F04	2SB1243
Q884	48T62967F02	CP., DTC114K
Q885	48T63420F01	CP., 2SA1037K
Q886	48T62967F03	CP., DTC124K
or	48T64222F02	CP., UN2212
Q887	48T93828F04	2SD1994A
Q888	48T52438F01	CP., 2SD601A
or	48T75616W01	CP., 2PD601A
Q890	48T93828F04	2SD1994A
Q891	48T62967F03	CP., DTC124K
or	48T64222F02	CP., UN2212
Diodes		
D001	48T85356W01	CP., 1PS184
or	48T63462F01	CP., DAN202K
or	48T52446F01	CP., MA151WK
D002	48T85356W01	CP., 1PS184
or	48T63462F01	CP., DAN202K
or	48T52446F01	CP., MA151WK
D003	48T68828F11	1SS133
D322	48T85355W01	CP., 1PS181
or	48T63463F01	CP., DAP202K
D323	48T85355W01	CP., 1PS181
or	48T63463F01	CP., DAP202K
D501	48T68828F11	1SS133
D502	48T85356W01	CP., 1PS184
or	48T63462F01	CP., DAN202K
or	48T52446F01	CP., MA151WK
D504	48T85270W02	MPG06G
D505	48T68580F02	DSA3A4
D506	48T85356W01	CP., 1PS184
or	48T63462F01	CP., DAN202K
or	48T52446F01	CP., MA151WK
D801	48T85356W01	CP., 1PS184
or	48T63462F01	CP., DAN202K
or	48T52446F01	CP., MA151WK
D811	48T85269W02	SB040
D821	48T68828F11	1SS133

Symbol No.	Part No.	Description
D831	48T85356W01	CP., 1PS184
or	48T63462F01	CP., DAN202K
or	48T52446F01	CP., MA151WK
D851	48T85355W01	CP., 1PS181
or	48T63463F01	CP., DAP202K
D852	48T85356W01	CP., 1PS184
or	48T63462F01	CP., DAN202K
or	48T52446F01	CP., MA151WK
D853	48T68828F11	1SS133
D881	48T85270W02	MPG06G
D882	48T85357W01	CP., 1PS226
or	48T64134F01	CP., DA204K
ZD001	48T25766W24	Zener., HZS9C1L
ZD002	48T25766W51	Zener., HZS181L
ZD003	48T25766W01	Zener., HZS6A1L
ZD201	48T25766W24	Zener., HZS9C1L
ZD501	48T25766W18	Zener., HZS7C3L
ZD502	48T25766W04	Zener., HZS6B1L
ZD882	48T25766W25	Zener., HZS9C2L
Coils		
L001	24T25798W13	Inductor, 1mH
L501	24T75055W06	Choke
L502	24T65110W16	Inductor, CP. 1μH
L503	24T65110W16	Inductor, CP. 1μH
L504	24T65110W16	Inductor, CP. 1μH
L811	24T16271W13	Inductor, 220μH
Crystals		
X001	91T85169W43	7.2MHz
X002	91T45118W18	4.332MHz
X501	91T85169W17	4.1943MHz
X502	91T85169W27	4.9152MHz
Switches		
S501	40T45282W01	Slide, SLD-42-508 (Ai-NET•NORM/[EQ/DIV])
S821	40T16096W03	Tact, SKHHLW (RESET)
Buzzer		
BZ501	50T85541W01	CD11PA-XZ

Symbol No.	Part No.	Description
Filter		
BPF001	91T75257W01	LPF11830K
Surge Protector		
DSP001	48T81048F02	DSP-201M
Thermistor		
TH501	48T93439F06	100K ohm
Capacitor		
C001	08S65128F69	CP., 0.01μF
E001	23S75372W05	ELY., 22μF / 16V
C002	08S82122F37	CP., 100pF
E002	23S75372W14	ELY., 0.68μF / 50V
C003	08S82122F37	CP., 100pF
C004	08T15807W05	CP., 0.1μF
E004	23S75372W08	ELY., 100μF / 16V
C005	08T15399W03	CP., 0.047μF
E005	23S75372W10	ELY., 0.1μF / 50V
C006	08S65128F67	CP., 6800pF
E006	23S75372W02	ELY., 100μF / 10V
E007	23S75372W04	ELY., 10μF / 16V
C008	08T15399W01	CP., 0.022μF
E008	23S75372W14	ELY., 0.68μF / 50V
C009	08S65128F69	CP., 0.01μF
E009	23S75372W05	ELY., 22μF / 16V
C010	08T55390W29	TF., 0.1μF
E010	23S75372W03	ELY., 220μF / 10V
C011	08S65128F69	CP., 0.01μF
E011	23S75372W04	ELY., 10μF / 16V
C012	08T15399W04	CP., 0.027μF
E012	23S75372W04	ELY., 10μF / 16V
C013	08T15399W02	CP., 0.033μF
C014	08T55390W31	TF., 0.15μF
E014	23S75372W16	ELY., 2.2μF / 50V
C015	23S82372F19	ELY., (B.P) 2.2μF / 50V
E015	23S75372W10	ELY., 0.1μF / 50V
C016	08T15399W02	CP., 0.033μF
E016	23S75372W04	ELY., 10μF / 16V
C017	08S65128F69	CP., 0.01μF
E017	23S75372W15	ELY., 1μF / 50V
C018	08S65128F69	CP., 0.01μF

Symbol No.	Part No.	Description
E018	23S75372W10	ELY., 0.1μF / 50V
C019	08S82122F31	CP., 56pF
E019	23S75372W06	ELY., 33μF / 16V
C020	08T15399W04	CP., 0.027μF
E020	23S75372W04	ELY., 10μF / 16V
C021	08S65128F69	CP., 0.01μF
C022	08S82122F19	CP., 18pF
C023	08S82122F19	CP., 18pF
C024	08T15399W01	CP., 0.022μF
C025	08T15399W01	CP., 0.022μF
C026	08S82122F23	CP., 27pF
C027	08S82122F23	CP., 27pF
C028	08S82122F55	CP., 560pF
C029	08S82122F49	CP., 330pF
C031	08S65128F81	CP., 0.039μF
C032	08S65128F69	CP., 0.01μF
C033	08S65128F61	CP., 2200pF
C034	08S65128F69	CP., 0.01μF
C035	08S65128F69	CP., 0.01μF
C036	08T15399W01	CP., 0.022μF
C037	08S82122F59	CP., 820pF
C038	08S82122F33	CP., 68pF
C039	08S65128F76	CP., 0.1μF
C040	08T15399W01	CP., 0.022μF
C041	08T15399W01	CP., 0.022μF
C042	08S82122F37	CP., 100pF
E201	23S75372W10	ELY., 0.1μF / 50V
E202	23S75372W13	ELY., 0.47μF / 50V
E203	23S75372W06	ELY., 33μF / 16V
E204	23S75372W02	ELY., 100μF / 10V
E205	23S75372W15	ELY., 1μF / 50V
E206	23S75372W15	ELY., 1μF / 50V
E207	23S75372W15	ELY., 1μF / 50V
C221	08T35122W07	PF., 0.033μF
E221	23S75372W04	ELY., 10μF / 16V
C222	08T35122W07	PF., 0.033μF
E222	23S75372W04	ELY., 10μF / 16V
C223	08T35122W39	PF., 5600pF
C224	08T35122W39	PF., 5600pF
E228	23S75372W07	ELY., 47μF / 16V
C229	08S65128F69	CP., 0.01μF
E229	23S75372W14	ELY., 0.68μF / 50V
E230	23S75372W14	ELY., 0.68μF / 50V
E231	23S75372W16	ELY., 2.2μF / 50V
E232	23S75373W05	ELY., 47μF / 16V
E233	23S75372W02	ELY., 100μF / 10V
E243	23S75372W11	ELY., 0.22μF / 50V
E244	23S75372W11	ELY., 0.22μF / 50V
E245	23S75372W09	ELY., 4.7μF / 35V

Symbol No.	Part No.	Description
E246	23S75372W09	ELY., 4.7µF / 35V
E247	23S75373W15	ELY., 3.3µF / 50V
E255	23S75372W15	ELY., 1µF / 50V
E256	23S75372W15	ELY., 1µF / 50V
E257	23S75372W15	ELY., 1µF / 50V
E261	23S75372W05	ELY., 22µF / 16V
C262	08S82122F59	CP., 820pF
E262	23S75372W05	ELY., 22µF / 16V
E263	23S75373W06	ELY., 100µF / 16V
E264	23S75373W06	ELY., 100µF / 16V
C265	08S82122F59	CP., 820pF
E265	23S75372W05	ELY., 22µF / 16V
E266	23S75372W15	ELY., 1µF / 50V
E267	23S75372W05	ELY., 22µF / 16V
E271	23S75372W05	ELY., 22µF / 16V
E272	23S75372W05	ELY., 22µF / 16V
E273	23S75373W06	ELY., 100µF / 16V
E274	23S75373W06	ELY., 100µF / 16V
C275	08S82122F59	CP., 820pF
E275	23S75372W05	ELY., 22µF / 16V
E276	23S75372W16	ELY., 2.2µF / 50V
E277	23S75372W05	ELY., 22µF / 16V
E281	23S75372W05	ELY., 22µF / 16V
C282	08S82122F59	CP., 820pF
E282	23S75372W05	ELY., 22µF / 16V
E283	23S75373W06	ELY., 100µF / 16V
E284	23S75373W06	ELY., 100µF / 16V
C285	08S82122F59	CP., 820pF
E285	23S75372W05	ELY., 22µF / 16V
E287	23S75372W05	ELY., 22µF / 16V
E291	23S75373W10	ELY., 0.33µF / 50V
C301	08S82122F13	CP., 10pF
E301	23S75372W04	ELY., 10µF / 16V
C302	08S82122F13	CP., 10pF
E302	23S75372W04	ELY., 10µF / 16V
C303	08S82122F13	CP., 10pF
E303	23S75372W04	ELY., 10µF / 16V
C304	08S82122F13	CP., 10pF
E304	23S75372W04	ELY., 10µF / 16V
E323	23S75372W04	ELY., 10µF / 16V
E324	23S75372W04	ELY., 10µF / 16V
E325	23S75372W04	ELY., 10µF / 16V
E326	23S75372W04	ELY., 10µF / 16V
E327	23S75372W04	ELY., 10µF / 16V
E328	23S75372W04	ELY., 10µF / 16V
E365	23T95115W01	ELY., 0.33µF / 50V
E366	23T95115W01	ELY., 0.33µF / 50V
E367	23T95115W01	ELY., 0.33µF / 50V
E368	23T95115W01	ELY., 0.33µF / 50V

Symbol No.	Part No.	Description
E369	23T95115W02	ELY., 1µF / 50V
E370	23S75372W07	ELY., 47µF / 16V
E371	23T95115W02	ELY., 1µF / 50V
C501	08T15399W01	CP., 0.022µF
E501	23S75372W03	ELY., 220µF / 10V
E502	23S75372W10	ELY., 0.1µF / 50V
E503	23S75372W15	ELY., 1µF / 50V
C504	08S82122F37	CP., 100pF
E504	23S75372W02	ELY., 100µF / 10V
E505	23T55405W01	ELY., 10µF / 16V
C506	08S82122F19	CP., 18pF
E506	23S75372W04	ELY., 10µF / 16V
C507	08S82122F19	CP., 18pF
C508	08T15399W04	CP., 0.027µF
C509	08S65128F69	CP., 0.01µF
E509	23T35505W06	ELY., 4700µF / 16V
E510	23S75372W15	ELY., 1µF / 50V
C511	08S82122F37	CP., 100pF
E511	23S75372W15	ELY., 1µF / 50V
C512	08S82122F37	CP., 100pF
C513	08S82122F37	CP., 100pF
C514	08S65128F69	CP., 0.01µF
C515	08S82122F19	CP., 18pF
C516	08S82122F19	CP., 18pF
C517	08S82122F61	CP., 1000pF
C519	08S82122F37	CP., 100pF
C520	08S82122F37	CP., 100pF
C521	08S82122F37	CP., 100pF
C522	08S82122F37	CP., 100pF
C525	08S82122F37	CP., 100pF
C526	08T15399W04	CP., 0.027µF
C527	08S82122F37	CP., 100pF
C528	08S82122F37	CP., 100pF
C532	08S82122F37	CP., 100pF
C533	08S82122F37	CP., 100pF
C535	08S82122F37	CP., 100pF
C537	08S82122F37	CP., 100pF
C538	08S82122F61	CP., 1000pF
C539	08S82122F61	CP., 1000pF
C540	08S82122F37	CP., 100pF
C541	08S82122F61	CP., 1000pF
C542	08S82122F37	CP., 100pF
C543	08S82122F37	CP., 100pF
C544	08S82122F37	CP., 100pF
C545	08S82122F13	CP., 10pF
C550	08S82122F37	CP., 100pF
C801	08S82122F37	CP., 100pF
C803	08S35374W01	CP., 0.1µF
C806	08S82122F37	CP., 100pF

Symbol No.	Part No.	Description
C807	08S82122F37	CP., 100pF
C811	08S82122F39	CP., 120pF
E811	23S75373W05	ELY., 47µF / 16V
C812	08T15399W04	CP., 0.027µF
E812	23T55378W03	ELY., 470µF / 10V
C821	08S82122F61	CP., 1000pF
E821	23S75372W04	ELY., 10µF / 16V
E831	23S75372W13	ELY., 0.47µF / 50V
E841	23S75373W10	ELY., 0.33µF / 50V
E842	23S75373W11	ELY., 0.47µF / 50V
E843	23S75373W07	ELY., 4.7µF / 35V
C851	08S82122F37	CP., 100pF
E851	23S75372W04	ELY., 10µF / 16V
C852	08S82122F23	CP., 27pF
C881	08S65128F69	CP., 0.01µF
E881	23S75372W04	ELY., 10µF / 16V
C882	08S82122F37	CP., 100pF
C883	08S82122F37	CP., 100pF
C884	08S82122F37	CP., 100pF
C885	08S82122F37	CP., 100pF
C886	08S82122F59	CP., 820pF
C889	08T55390W33	TF., 0.22µF

Resistors (All resistors are chip 1/10W±5% unless otherwise noted.)

Symbol No.	Part No.	Description
R001	06S64995F53	1K ohm
R002	06S64995F77	10K ohm
R003	06S64995F81	15K ohm
R004	06S64995F77	10K ohm
R005	06S64995F83	18K ohm
R006	06S64995F77	10K ohm
R007	06S64995F77	10K ohm
R009	06S64995F61	2.2K ohm
R010	06S64995F61	2.2K ohm
R011	06S64995F53	1K ohm
R012	06S64995F53	1K ohm
R013	06S64995F61	2.2K ohm
R014	06S64995F29	100 ohm
R015	06S64995F83	18K ohm
R016	06S64995F85	22K ohm
R017	06S64995F53	1K ohm
R018	06S64995F71	5.6K ohm
R019	06S64995F61	2.2K ohm
R020	06S64995F53	1K ohm
R021	06S64995F77	10K ohm
R022	06S64995F53	1K ohm
R023	06S70072F61	2.2K ohm 1/4W

Symbol No.	Part No.	Description
R024	06S64995F53	1K ohm
R025	06S64995F93	47K ohm
R026	06S64995F53	1K ohm
R027	06S64995F93	47K ohm
R028	06S64995F53	1K ohm
R029	06S64995F61	2.2K ohm
R030	06S64995F77	10K ohm
R031	06S64995F69	4.7K ohm
R032	06S64995F53	1K ohm
R033	06S64995F53	1K ohm
R034	06S64996F02	100K ohm
R035	06S64996F02	100K ohm
R036	06S64996F04	120K ohm
R037	06S64995F77	10K ohm
R038	06S64995F77	10K ohm
R039	06S64996F02	100K ohm
R040	06S64995F13	22 ohm
R041	06S64996F14	330K ohm
R042	06S64995F29	100 ohm
R043	06S64996F10	220K ohm
R044	06S64995F81	15K ohm
R045	06S64996F01	91K ohm
R046	06S64996F26	1M ohm
R047	06S64995F89	33K ohm
R048	06S64995F89	33K ohm
R049	06S64995F65	3.3K ohm
R050	06S64995F53	1K ohm
R051	06S70072F61	2.2K ohm 1/4W
R052	06S64995F77	10K ohm
R053	06S70072F41	330 ohm 1/4W
R054	06S53330F73	6.8K ohm 1/8W
R058	06S64996F02	100K ohm
R059	06S64996F02	100K ohm
R060	06S64995F50	750 ohm
R061	06S64995F50	750 ohm
R201	06S64995F77	10K ohm
R202	06S64995F77	10K ohm
R203	06S64995F77	10K ohm
R204	06S64995F77	10K ohm
R205	06S64995F77	10K ohm
R206	06S64995F77	10K ohm
R207	06S64995F77	10K ohm
R208	06S64995F77	10K ohm
R209	06S70072F78	2.2 ohm 1/4W
R210	06S70072F78	2.2 ohm 1/4W
R211	06S70072F41	330 ohm 1/4W
R212	06S64995F93	47K ohm
R213	06S64995F93	47K ohm
R221	06S64995F77	10K ohm

Symbol No.	Part No.	Description
R222	06S64995F77	10K ohm
R223	06S64995F91	39K ohm
R224	06S64995F91	39K ohm
R243	06S64996F02	100K ohm
R244	06S64996F02	100K ohm
R247	06S64995F65	3.3K ohm
R248	06S64995F65	3.3K ohm
R261	06S64995F90	36K ohm
R262	06S64995F90	36K ohm
R263	06S64995F90	36K ohm
R264	06S64995F90	36K ohm
R271	06S64995F90	36K ohm
R272	06S64995F90	36K ohm
R273	06S64995F90	36K ohm
R274	06S64995F90	36K ohm
R281	06S64995F90	36K ohm
R282	06S64995F90	36K ohm
R283	06S64995F90	36K ohm
R284	06S64995F90	36K ohm
R291	06S64995F85	22K ohm
R292	06S64995F85	22K ohm
R301	06T15443W85	22K ohm
R302	06T15443W85	22K ohm
R303	06T15443W85	22K ohm
R304	06T15443W85	22K ohm
R305	06T15443W85	22K ohm
R306	06T15443W85	22K ohm
R307	06T15443W85	22K ohm
R308	06T15443W85	22K ohm
R329	06S64995F37	220 ohm
R330	06S64995F37	220 ohm
R333	06S64995F29	100 ohm
R334	06S64995F29	100 ohm
R335	06S64995F85	22K ohm
R336	06S64995F85	22K ohm
R337	06S64995F37	220 ohm
R338	06S64995F37	220 ohm
R339	06S64995F70	5.1K ohm
R340	06S64995F70	5.1K ohm
R341	06S64995F29	100 ohm
R342	06S64995F29	100 ohm
R343	06S64995F85	22K ohm
R344	06S64995F85	22K ohm
R345	06S64995F37	220 ohm
R346	06S64995F37	220 ohm
R347	06S64995F70	5.1K ohm
R348	06S64995F70	5.1K ohm
R349	06S64995F29	100 ohm
R350	06S64995F29	100 ohm

Symbol No.	Part No.	Description
R351	06S64995F85	22K ohm
R352	06S64995F85	22K ohm
R373	06S64995F77	10K ohm
R501	06S64996F26	1M ohm
R503	06S64995F53	1K ohm
R504	06S64995F85	22K ohm
R505	06S64995F53	1K ohm
R506	06S64995F53	1K ohm
R507	06S64995F53	1K ohm
R508	06S64995F53	1K ohm
R511	06S64995F61	2.2K ohm
R512	06S64995F85	22K ohm
R513	06S64995F77	10K ohm
R514	06S64995F53	1K ohm
R515	06S64996F02	100K ohm
R516	06S64995F85	22K ohm
R517	06S64995F85	22K ohm
R518	06S64995F85	22K ohm
R519	06S64995F85	22K ohm
R520	06S64995F93	47K ohm
R521	06S64996F18	470K ohm
R522	06S64996F18	470K ohm
R523	06S64996F18	470K ohm
R524	06S64995F93	47K ohm
R525	06S64995F93	47K ohm
R527	06S64995F53	1K ohm
R528	06S64995F53	1K ohm
R529	06S64995F53	1K ohm
R530	06S64995F53	1K ohm
R531	06S53330F69	4.7K ohm 1/8W
R532	06S53330F69	4.7K ohm 1/8W
R533	06S70072F67	3.9K ohm 1/4W
R534	06S64995F93	47K ohm
R535	06S64995F77	10K ohm
R536	06S64995F53	1K ohm
R537	06S64995F53	1K ohm
R538	06S64995F53	1K ohm
R539	06S64995F53	1K ohm
R540	06S64995F53	1K ohm
R541	06S64995F53	1K ohm
R542	06S64995F53	1K ohm
R544	06S64995F93	47K ohm
R545	06S64995F53	1K ohm
R547	06S53330F53	1K ohm 1/8W
R548	06S64995F77	10K ohm
R550	06S53330F77	10K ohm 1/8W
R551	06S70072F63	2.7K ohm 1/4W
R552	06S70072F63	2.7K ohm 1/4W
R553	06S70072F63	2.7K ohm 1/4W

Symbol No.	Part No.	Description
R554	06S70072F63	2.7K ohm 1/4W
R555	06S70072F63	2.7K ohm 1/4W
R558	06S64995F77	10K ohm
R559	06S64995F77	10K ohm
R560	06S64995F37	220 ohm
R561	06S64995F81	15K ohm
R562	06S64995F77	10K ohm
R563	06S64995F77	10K ohm
R564	06S64995F77	10K ohm
R565	06S64995F77	10K ohm
R566	06S64995F93	47K ohm
R567	06S70072F39	270 ohm 1/4W
R568	06S70072F39	270 ohm 1/4W
R570	06S64995F69	4.7K ohm
R571	06S64995F69	4.7K ohm
R572	06S64995F69	4.7K ohm
R573	06S64995F69	4.7K ohm
R574	06S64995F93	47K ohm
R575	06S64995F93	47K ohm
R576	06S64995F93	47K ohm
R577	06S70072F27	82 ohm 1/4W
R578	06S70072F27	82 ohm 1/4W
R579	06S70072F27	82 ohm 1/4W
R580	06S64995F37	220 ohm
R581	06S64995F37	220 ohm
R582	06S64995F37	220 ohm
R583	06S64995F37	220 ohm
R590	06S64995F79	12K ohm
R591	06S70072F27	82 ohm 1/4W
R592	06S70072F27	82 ohm 1/4W
R593	06S70072F27	82 ohm 1/4W
R594	06S70072F27	82 ohm 1/4W
R596	06S64995F93	47K ohm
R597	06S64996F02	100K ohm
R598	06S64996F18	470K ohm
R599	06S64996F02	100K ohm
R600	06S64995F67	3.9K ohm
R601	06S64995F67	3.9K ohm
R602	06S64995F84	20K ohm
R603	06S64995F84	20K ohm
R651	06S64996F18	470K ohm
R801	06S64995F85	22K ohm
R802	06S64995F85	22K ohm
R803	06S64995F85	22K ohm
R804	06S64995F85	22K ohm
R811	06S70072F47	560 ohm 1/4W
R812	06S70072F29	100 ohm 1/4W
R813	06S70072F47	560 ohm 1/4W
R814	06T15443W85	22K ohm

Symbol No.	Part No.	Description
R815	06T15443W69	4.7K ohm
R821	06S64995F85	22K ohm
R822	06S64995F69	4.7K ohm
R823	06S53330F63	2.7K ohm 1/8W
R833	06S64995F77	10K ohm
R834	06S64995F77	10K ohm
R843	06S64995F50	750 ohm
R844	06S64995F50	750 ohm
R845	06S64995F50	750 ohm
R851	06S64995F73	6.8K ohm
R852	06S64995F77	10K ohm
R853	06S64995F77	10K ohm
R854	06S64995F69	4.7K ohm
R855	06S64995F73	6.8K ohm
R856	06S64995F77	10K ohm
R857	06S64995F77	10K ohm
R858	06S70072F19	39 ohm 1/4W
R859	06S70072F19	39 ohm 1/4W
R860	06S70072F19	39 ohm 1/4W
R861	06S70072F19	39 ohm 1/4W
R862	06S64995F61	2.2K ohm
R863	06S64995F57	1.5K ohm
R864	06S64995F57	1.5K ohm
R865	06S64995F61	2.2K ohm
R866	06S64995F55	1.2K ohm
R867	06S70072F05	10 ohm 1/4W
R881	06S53330F77	10K ohm 1/8W
R885	06S70072F59	1.8K ohm 1/4W
R886	06S70072F59	1.8K ohm 1/4W
R887	06S64995F77	10K ohm
R888	06S70072F04	8.2 ohm 1/4W
R889	06S70072F04	8.2 ohm 1/4W
R890	06S70072F04	8.2 ohm 1/4W
R891	06S64995F77	10K ohm
R892	06S53330F77	10K ohm 1/8W
R893	06S70072F61	2.2K ohm 1/4W
R894	06S64995F77	10K ohm
R895	06S70072F45	470 ohm 1/4W
R896	06S64995F55	1.2K ohm
R897	06S70072F04	8.2 ohm 1/4W
R898	06S70072F05	10 ohm 1/4W
R899	06S70072F05	10 ohm 1/4W

Symbol No.	Part No.	Description
Front P.C.Board		
IC's		
IC401	51T85152W01	LC75883W
IC402	51T55639W01	RS-31
Transistors		
Q401	48T63461F04	CP., 2SC2411K
Q402	48T63461F04	CP., 2SC2411K
Q403	48T63461F04	CP., 2SC2411K
Q404	48T63461F04	CP., 2SC2411K
Q405	48T63461F04	CP., 2SC2411K
Q406	48T62967F03	CP., DTC124K
or	48T64222F02	CP., UN2212
Q407	48T62967F03	CP., DTC124K
or	48T64222F02	CP., UN2212
Q408	48T62967F03	CP., DTC124K
or	48T64222F02	CP., UN2212
Diodes		
D406	48T81063F01	CP., MA159
D407	48T81063F01	CP., MA159
Switches		
S401	40T55656W06	Tact, CP., SKQMAJ (PWR/INTLZ)
S403	40T75234W01	Tact, SKQNAC (SOURCE/A.S.U.)
S404	40T55656W06	Tact, CP., SKQMAJ (EJECT)
S405	40T55656W06	Tact, CP., SKQMAJ (DN)
S406	40T55656W06	Tact, CP., SKQMAJ (UP)
S407	40T75234W01	Tact, SKQNAC (TUNE/A.MEMO)
S408	40T75234W01	Tact, SKQNAC (BAND)
S409	40T55656W06	Tact, CP., SKQMAJ (TITLE)
S410	40T55656W06	Tact, CP., SKQMAJ (T.INFO)
S411	40T55656W06	Tact, CP., SKQMAJ (1/RDS)
S412	40T55656W06	Tact, CP., SKQMAJ (2/PTY)
S413	40T55656W06	Tact, CP., SKQMAJ (3/P.PTY)
S414	40T55656W06	Tact, CP., SKQMAJ (4/M.I.X.)
S415	40T55656W06	Tact, CP., SKQMAJ (5/RPT)
S416	40T55656W06	Tact, CP., SKQMAJ (6/SCAN)
S417	40T55656W06	Tact, CP., SKQMAJ (F/DEMO)

Symbol No.	Part No.	Description
Lamps		
PL401	65T75231W10	9V-85mA (GRN)
PL402	65T75231W10	9V-85mA (GRN)
PL403	65T75522W02	CP., 9V-85mA (ORG)
PL404	65T75522W02	CP., 9V-85mA (ORG)
PL405	65T75233W02	CP., 6V-80mA (ORG)
PL406	65T75233W02	CP., 6V-80mA (ORG)
PL408	65T75233W02	CP., 6V-80mA (ORG)
PL409	65T75233W01	CP., 6V-80mA (GRN)
PL410	65T75233W01	CP., 6V-80mA (GRN)
PL412	65T75233W01	CP., 6V-80mA (GRN)
PL413	65T75233W01	CP., 6V-80mA (GRN)
PL414	65T85350W01	6V-80mA (GRN)
LED's		
LD401	48T65477W01	CP., SML-010DT2 (ORG)
or	48T65477W05	CP., SML-010DTT87 (ORG)
LD402	48T65477W01	CP., SML-010DT2 (ORG)
or	48T65477W05	CP., SML-010DTT87 (ORG)
LD403	48T65477W01	CP., SML-010DT2 (ORG)
or	48T65477W05	CP., SML-010DTT87 (ORG)
LD404	48T65477W02	CP., SML-010LTT87 (RED)
LD405	48T65477W02	CP., SML-010LTT87 (RED)
LD406	48T65477W01	CP., SML-010DT2 (ORG)
or	48T65477W05	CP., SML-010DTT87 (ORG)
Capacitors		
C401	08S82122F59	CP., 820pF
E401	23S55311W42	TAN., 4.7μF / 20V
C402	08T15399W03	CP., 0.047μF
C403	08T15399W03	CP., 0.047μF
C404	08T15399W03	CP., 0.047μF
C405	08S82122F61	CP., 1000pF
C409	08S35374W01	CP., 0.1μF
Resistors		(All resistors are chip 1/10W±5% unless otherwise noted.)
R401	06S64995F53	1K ohm
R402	06S64995F53	1K ohm
R403	06S64995F53	1K ohm
R404	06S64995F53	1K ohm
R405	06S64995F53	1K ohm

Symbol No.	Part No.	Description
R406	06S64995F97	68K ohm
R407	06S64995F69	4.7K ohm
R410	06S70072F10	16 ohm 1/4W
R411	06S70072F10	16 ohm 1/4W
R412	06S70072F10	16 ohm 1/4W
R413	06S70072F10	16 ohm 1/4W
R414	06S70072F61	2.2K ohm 1/4W
R415	06S70072F61	2.2K ohm 1/4W
R416	06S70072F53	1K ohm 1/4W
R417	06S70072F48	620 ohm 1/4W
R419	06S70072F17	33 ohm 1/4W
R420	06S70072F19	39 ohm 1/4W
R422	06S64995F61	2.2K ohm
R423	06S70072F10	16 ohm 1/4W
R424	06S70072F10	16 ohm 1/4W
R425	06S70072F10	16 ohm 1/4W
R426	06S70072F11	18 ohm 1/4W
R427	06S70072F11	18 ohm 1/4W
R428	06S70072F11	18 ohm 1/4W
R430	06S70072F04	8.2 ohm 1/4W
R431	06S70072F04	8.2 ohm 1/4W
R436	06S70072F04	8.2 ohm 1/4W
R437	06S70072F04	8.2 ohm 1/4W
R439	06S70072F49	680 ohm 1/4W
R442	06S70072F51	820 ohm 1/4W
R443	06S53330F71	5.6K ohm 1/8W
R445	06S64995F77	10K ohm
R446	06S64995F77	10K ohm
R447	06S64995F77	10K ohm
R448	06S64995F77	10K ohm
R449	06S64995F53	1K ohm
R450	06S64995F53	1K ohm
R460	06S70072F10	16 ohm 1/4W
R461	06S70072F10	16 ohm 1/4W
R462	06S70072F07	12 ohm 1/4W
R464	06S64995F61	2.2K ohm
R466	06S70072F10	16 ohm 1/4W
R467	06S70072F10	16 ohm 1/4W
R474	06S64995F53	1K ohm

DP-Main P.C.Board

IC's

Symbol No.	Part No.	Description
IC1101	51T75549W01	TC9296F
IC1102	51T75548W01	TA2066F
IC1103	51T85408W01	BA6791FP
IC1104	51T16025W01	NJM2100M
IC1201	51T16025W01	NJM2100M
IC1202	51T11054W02	NJM78L05UA
IC1501	51T65209W01	BA6287F

Transistors

Symbol No.	Part No.	Description
Q1101	48T80611F01	CP., 2SB1132
Q1102	48T80611F01	CP., 2SB1132

Diode

Symbol No.	Part No.	Description
D1501	48T81063F01	CP., MA159

Crystal

Symbol No.	Part No.	Description
X1101	91T45433W92	CP., 16.934MHz

Capacitors

Symbol No.	Part No.	Description
C1101	08S35374W01	CP., 0.1µF
E1101	23S55311W42	CP. TAN., 4.7µF / 20V
C1102	08S45677W36	CP., 100pF
E1102	23S55311W23	CP. TAN., 10µF / 10V
C1103	08S65128F71	CP., 0.015µF
E1103	23S55311W42	CP. TAN., 4.7µF / 20V
C1104	08S65128F69	CP., 0.01µF
E1104	23S55311W23	CP. TAN., 10µF / 10V
C1105	08S65128F69	CP., 0.01µF
E1105	23S55311W42	CP. TAN., 4.7µF / 20V
C1106	08S65128F69	CP., 0.01µF
E1106	23T25191W42	CP. ELY., 22µF / 6.3V
C1107	08T15399W02	CP., 0.033µF
E1107	23T25191W42	CP. ELY., 22µF / 6.3V
C1108	08S35374W01	CP., 0.1µF
E1108	23S55311W23	CP. TAN., 10µF / 10V
C1109	08S65128F71	CP., 0.015µF
E1109	23T25191W41	CP. ELY., 10µF / 16V
E1110	23T25191W05	CP. ELY., 10µF / 6.3V
C1111	08T15399W01	CP., 0.022µF
C1112	08T15399W01	CP., 0.022µF
C1113	08S35374W01	CP., 0.1µF
C1114	08S35374W01	CP., 0.1µF
C1115	08S45677W16	CP., 15pF
C1116	08S45677W16	CP., 15pF
C1118	08S65128F69	CP., 0.01µF

Symbol No.	Part No.	Description
C1119	08S65128F79	CP., 0.027µF
C1120	08S65128F71	CP., 0.015µF
C1121	08S35374W01	CP., 0.1µF
C1122	08T65289W03	CP., 1µF
C1124	08S45677W14	CP., 12pF
C1125	08S45677W05	CP., 3pF
C1127	08S65128F65	CP., 4700pF
C1128	08S65128F63	CP., 3300pF
C1131	08T15399W03	CP., 0.047µF
C1132	08S45676W62	CP., 1200pF
C1133	08S35374W01	CP., 0.1µF
C1134	08S65128F79	CP., 0.027µF
C1135	08S65128F62	CP., 2700pF
C1136	08T55487W02	CP., 0.22µF
C1138	08S35374W01	CP., 0.1µF
C1140	08S35374W01	CP., 0.1µF
E1201	23T25191W42	CP. ELY., 22µF / 6.3V
E1202	23T25191W42	CP. ELY., 22µF / 6.3V
E1204	23T25191W05	CP. ELY., 10µF / 6.3V
C1205	08S45677W32	CP., 68pF
E1205	23T25191W42	CP. ELY., 22µF / 6.3V
C1206	08S45677W32	CP., 68pF
E1206	23T25191W41	CP. ELY., 10µF / 16V
C1207	08S45677W32	CP., 68pF
E1207	23T25191W05	CP. ELY., 10µF / 6.3V
C1208	08S45677W32	CP., 68pF
C1209	08S45677W32	CP., 68pF
C1210	08S45677W32	CP., 68pF
C1212	08S45677W32	CP., 68pF
C1213	08S45677W32	CP., 68pF
C1215	08S65128F79	CP., 0.027µF
C1216	08S82122F61	CP., 1000pF
C1217	08S82122F61	CP., 1000pF
C1501	08S65128F79	CP., 0.027µF
E1501	23T25191W41	CP. ELY., 10µF / 16V
Resistors		(All resistors are chip 1/16W±5% unless otherwise noted.)
R1101	06S45674W57	1K ohm
R1102	06S45674W81	10K ohm
R1103	06S45674W97	47K ohm
R1104	06S45675W06	100K ohm
R1105	06S45675W34	2.2M ohm
R1106	06S45674W93	33K ohm
R1108	06S64995F77	10K ohm 1/10W
R1109	06S45674W81	10K ohm
R1110	06S45674W57	1K ohm
R1111	06S45674W57	1K ohm

Symbol No.	Part No.	Description
R1112	06S45674W65	2.2K ohm
R1113	06S70072F22	51 ohm 1/4W
R1114	06S70072F22	51 ohm 1/4W
R1115	06S45674W85	15K ohm
R1116	06S45674W81	10K ohm
R1117	06S45674W73	4.7K ohm
R1119	06S45674W85	15K ohm
R1121	06S45674W85	15K ohm
R1123	06S45674W91	27K ohm
R1124	06S45674W57	1K ohm
R1125	06S45674W33	100 ohm
R1126	06S45674W33	100 ohm
R1127	06S45674W54	750 ohm
R1128	06S45674W54	750 ohm
R1130	06S45674W97	47K ohm
R1131	06S45674W57	1K ohm
R1135	06S45674W65	2.2K ohm
R1136	06S45674W77	6.8K ohm
R1137	06S45674W81	10K ohm
R1138	06S45674W95	39K ohm
R1140	06S45675W02	68K ohm
R1141	06S45674W91	27K ohm
R1143	06S45674W77	6.8K ohm
R1145	06S45674W92	30K ohm
R1146	06S45674W81	10K ohm
R1147	06S45674W81	10K ohm
R1150	06S64995F77	10K ohm 1/10W
R1151	06S45675W04	82K ohm
R1205	06S45674W25	47 ohm
R1206	06S45674W25	47 ohm
R1207	06S45674W95	39K ohm
R1208	06S45674W95	39K ohm
R1209	06S45674W90	24K ohm
R1210	06S45674W90	24K ohm
R1211	06S45674W95	39K ohm
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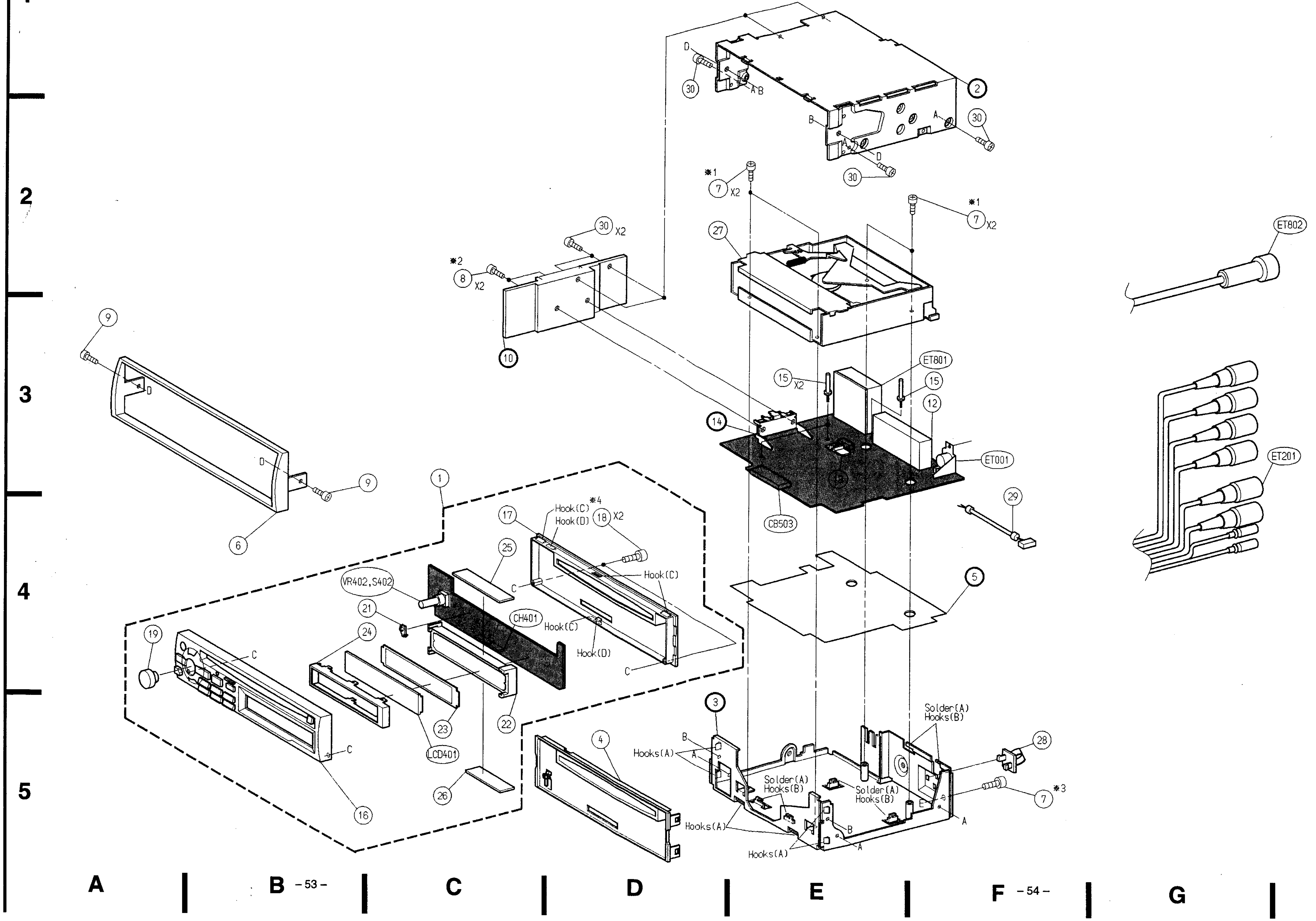
R1214	06S45674W90	24K ohm
R1215	06S45674W90	24K ohm
R1216	06S45674W90	24K ohm
R1217	06S45674W90	24K ohm
R1218	06S45674W90	24K ohm
R1219	06S45674W73	4.7K ohm
R1220	06S45674W73	4.7K ohm
R1221	06S45674W73	4.7K ohm
R1222	06S45674W73	4.7K ohm

Symbol No.	Part No.	Description
Miscellaneous		
CB503	09T85354W16	16P Connector
CH401	09T85353W16	16P Connector
ET001	09T55211W01	Antenna Receptacle
ET201	01T85446W02	Assy., Connector
ET801	01T75292W05	Assy., ISO Connector
ET802	01T55619W09	Ai-NET Connector
HD1201	88T55261W01	Pick-Up Unit
LCD401	65T85168W01	LCD Display
M1301	01V73300W33	Assy., Motor-Worm (7V-370mA)
M1302	01V73300W35	Assy., Motor Spindle (2V-90mA)
M1303	01V73300W38	Assy., Motor Sled (7V-370mA)
S1301	40T25956W02	Switch, Detector (DISC CHUCKING POSITION)
S1302	40T25956W02	Switch, Detector (DISC LOAD)
S1303	40T25956W01	Switch, Detector (DISC LOAD)
S1304	40T25956W02	Switch, Detector (DISC END)
S1305	40T71025F03	Switch, Detector (LIMIT)
VR402 S402	40T45670W05	Rotary, Encoder Volume (AUDIO CONTROL/MODE•LOUD)

Symbol No.	Part No.	Description

Exploded View (Cabinet)

NOTE: The screws marked "※1~4" are disassembly parts.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Hooks(A)
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Cabinet Assembly Parts List

NOTE:No parts number on parts list are not supplied.

Symbol No.	Index	Part No.	Description
1	1-C	01V91500W85	Assy., Nose Unit
4	5-D	13C80236W01	Assy., Front Escutcheon
6	4-B	33C00544K01	Assy., Face Plate
or	4-B	33C81778W01	Assy., Face Plate
7		03S44205G29	Screw, Pan (M2.6X6)
8	2-C	03S38013W05	Screw, Pan (M2.6X16)
9		03S38013W13	Screw, Bind (M2.6X6)
12	3-F	77B60578W01	FM / MW /LW Tuner Unit, MB4R3010 (FE001)
13	3-E	36A70327W01	Knob, Slide
15	3-E	09T84840F02	Lug, Style 32mm
16	5-B	13C80835W03	Assy., Nosepiece
17	4-C	13D80480W01	Nose, Bottom
18	4-D	03S71677F56	Screw, Pan (M1.7X12)
19	4-A	36B80547W01	Knob, Rotary (VOL)
21	4-B	15A80548W01	Cover, LED
22	5-C	15C80755W01	Assy., Case LCD
23	5-C	26A80302W01	Reflector, Sheet
24	4-B	15B80301W01	Cover, LCD
25	4-C	75T85249W01	Rubber, Electric
26	5-C	75T85249W02	Rubber, Electric
27	2-D	81D70953W01	CD Deck Mechanism, DP24L010
28	5-F	15A70387W01	Holder, Antenna
29	4-F	01T75186W01	Assy., Antenna Wire
30	2-D	03S38013W24	Screw, Pan (M2.6X6)

Symbol No.	Index	Part No.	Description

Disassembly Instructions

1. Removal of Nose Unit

(1) Refer to the Owner's Manual (Part No. 68P81384W46).

2. Removal of Front Escutcheon

(1) After removal of Face Plate and Top Cover, remove six Hooks (A). .... Hooks (A) (5-D, 5-E)

3. Removal of CD Deck Mechanism

(1) After removal of Face Plate and Top Cover, remove four screws No.7. .... Screws No. 7 (※1) (2-E, 2-F)

(2) Disconnect one connector from Main P.C. Board.

4. Removal of Main P.C. Board

(1) After removal of CD Deck Mechanism, remove two screws No. 8, and remove Heat Sink. .... Screws No. 8 (※2) (2-C)

(2) Remove one screw No.7. .... Screw No. 7 (※3) (5-F)

(3) Remove six Solder (A) and six Hooks (B). .... Solder (A) (5-E, 5-F)
Hooks (B) (5-E, 5-F)

5. Removal of Front P.C. Board

(1) After removal of Nose Unit, remove two screws No.18, four Hooks (C) and Nosepiece. .... Screws No. 18 (※4) (4-D)
Hooks (C) (4-D)

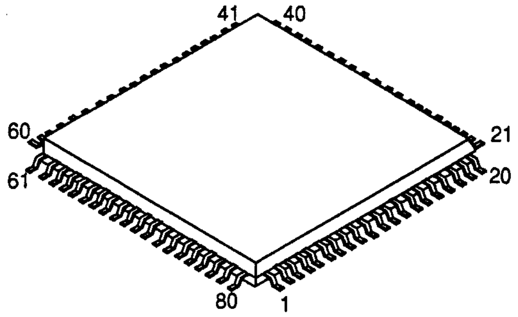
(2) Remove two Hooks (D) and Nose Bottom. .... Hooks (D) (4-D)

NOTE: For the screws No., Hooks, and Solder, refer to the Exploded View (Cabinet).

Semi-Conductor Lead Identifications

NOTE : For the parts not mentioned, refer to the Schematic Diagram.

75099W38 : IC501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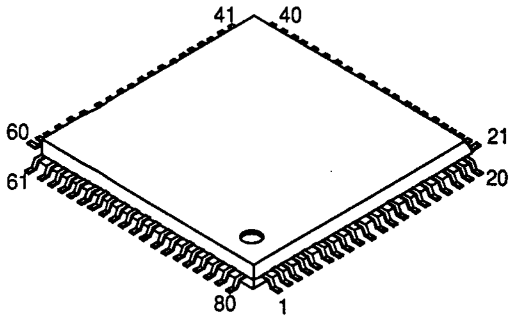
PIN NO.	CODE ADDRESS	I/O	PIN NO.	CODE ADDRESS	I/O	PIN NO.	CODE ADDRESS	I/O	PIN NO.	CODE ADDRESS	I/O
1	GND	—	21	EV DATA	O	41	CCE	O	61	REMOCON	I
2	ENCODER1	I	22	EV CLK	O	42	LOCK	I	62	B-HOLD	I
3	ENCODER2	I	23	L-CONT	O	43	MUTE	O	63	A-HOLD	I
4	GND	—	24	NFP 1	O	44	NC	—	64	BUS-IN	I
5	PULL UP	—	25	LOAD FWD	O	45	DTS MUTE	I	65	SW-A	I
6	NC	—	26	LOAD BWD	O	46	BUZZER	O	66	BUS-OUT	O
7	V_{DD}	—	27	NFP 2	O	47	NC	—	67	SW-B	I
8	DTS STS	I	28	SW-D	I	48	NC	—	68	V_{DD}	—
9	DTS CMD	O	29	SW-C	I	49	DTS STRT	O	69	X2	O
10	DTS CLK	O	30	GND	—	50	ALARM	O	70	X1	I
11	LCD DO	I	31	BAT DET.	I	51	DTS CE	O	71	GND	—
12	LCD DI	O	32	V-CONT	O	52	TUNER ON	O	72	NC	—
13	LCD CL	O	33	GND	—	53	LCD ON	O	73	GND	—
14	LCD CE	O	34	LIMIT-SW	I	54	NOSE PWR	O	74	AV_{DD}	—
15	$\overline{\text{LCD RST}}$	O	35	LSI-RST	O	55	POWER ON	O	75	AV_{REF}	I
16	CD CE	O	36	BUS-0	I/O	56	PWR IC ON	O	76	GND	—
17	CD CLOCK	O	37	BUS-1	I/O	57	NC	—	77	GND	—
18	CD DATA	O	38	BUS-2	I/O	58	Ai-DIN $\overline{\text{IN}}$/OUT	I	78	GND	—
19	NFP EV DATA	O	39	BUS-3	I/O	59	IN-INT	I	79	T-SENS	I
20	NFP EV CE	O	40	BUS CK	O	60	$\overline{\text{RESET}}$	I	80	NOSE ON	I

85088W01 : IC504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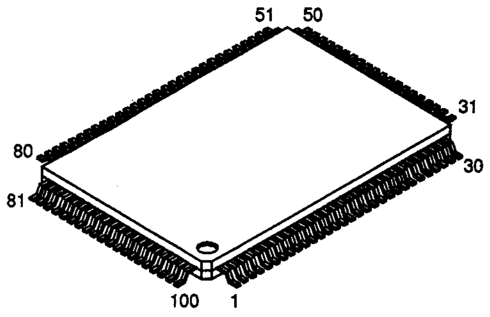
PIN NO.	CODE ADDRESS	I/O	PIN NO.	CODE ADDRESS	I/O	PIN NO.	CODE ADDRESS	I/O	PIN NO.	CODE ADDRESS	I/O
1	LW	O	21	NC	—	41	NC	—	61	RDS CLK	I
2	LO/$\overline{\text{DX}}$	O	22	NC	—	42	NC	—	62	RDS DATA	I
3	NC	—	23	NC	—	43	NC	—	63	DTS CE	I
4	AV_{SS}	—	24	NC	—	44	NC	—	64	NC	—
5	$\overline{\text{LPF SW}}$	O	25	NC	—	45	NC	—	65	NC	—
6	IF MUTE	O	26	NC	—	46	NC	—	66	NC	—
7	AV_{REF1}	—	27	NC	—	47	NC	—	67	50K REF	O
8	PULL UP	—	28	NC	—	48	NC	—	68	V_{DD}	—
9	NC	—	29	NC	—	49	NC	—	69	X2	—
10	NC	—	30	NC	—	50	NC	—	70	X1	—
11	PLL CLK	O	31	NC	—	51	NC	—	71	GND	—
12	PLL DATA	O	32	NC	—	52	NC	—	72	NC	—
13	PLL CE	O	33	GND	—	53	NC	—	73	PLL DATAI	I
14	DTS MUTE	O	34	NC	—	54	NC	—	74	AV_{DD}	—
15	DTS START	I	35	NC	—	55	NC	—	75	AV_{REF0}	—
16	DTS CMD	I	36	NC	—	56	NC	—	76	S.METER	I
17	DTS STS	O	37	NC	—	57	NC	—	77	A/I	I
18	DTSCLK	I	38	NC	—	58	FM/$\overline{\text{AM}}$	O	78	M.P	I
19	NC	—	39	NC	—	59	AUDIO IN	I	79	ST	I
20	NC	—	40	NC	—	60	RESET	I	80	SD	I

TC9296F: IC1101 (DP24L010)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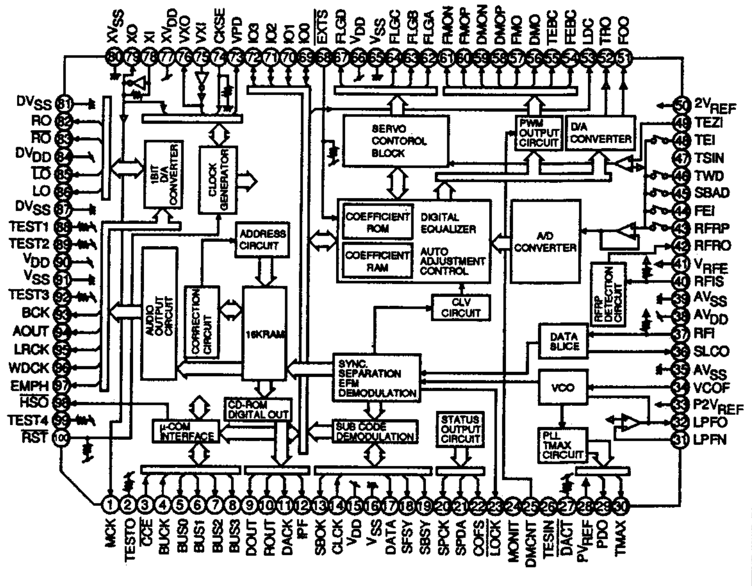
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FEBC
LDC
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CLOCK GENERATOR
SERVO CONTOROL BLOCK
PWM OUTPUT CIRCUIT
D/A CONVERTER
ADDRESS CIRCUIT
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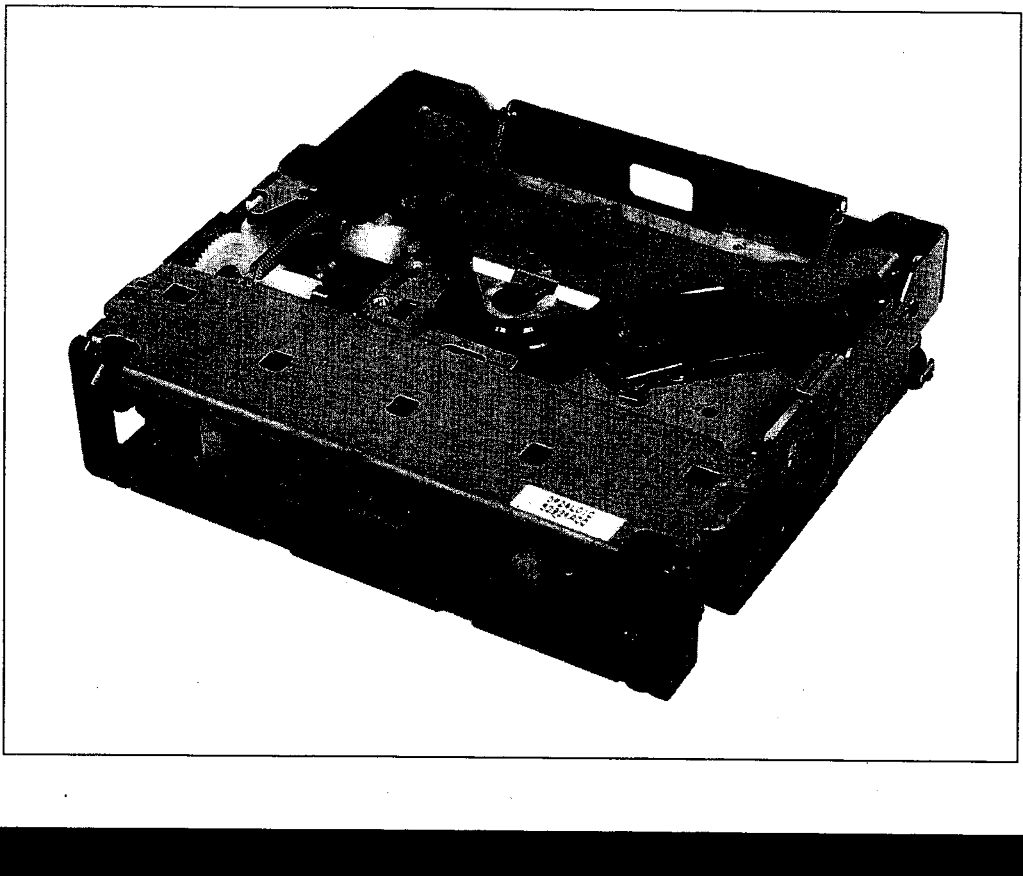
DIGITAL EQUALIZER
COEFFICIENT RAM
AUTO ADJUSTMENT CONTROL
A/D CONVERTER
AUDIO OUTPUT CIRCUIT
CORRECTION CIRCUIT
16KRAM
CLV CIRCUIT
RFRP DETECTION CIRCUIT
DATA SLICE
SYNC. SEPARATION EFM DEMODULATION
VCO
CD-ROM DIGITAL OUT
μ-COM INTERFACE
SUB CODE DEMODULATION
STATUS OUTPUT CIRCUIT
PLL TMAX CIRCUIT

ALPINE®
SERVICE MANUAL

CD Player Mechanism

V19008



DP-L SERIES

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Component Disassembly and Assembly Notes .... 16 to 20
Exploded View (Cassette Deck Mechanism) .... 21 to 22
CD Mechanism Assembly Parts List 23

Mechanism Function Description
メカの動作説明

<Outline of DP24L010 mechanism>
＜DP24L010メカ概要＞

1. Mechanical specifications

The DP-L consists of one motor and 5 switches.
The mechanism allows a loading of 12 cm disc only and ejects 8 cm disc if it is detected.

1. 機構仕様

DP-Lは1 MOTOR/5 SWで構成されている。
また、本MECHは12cmDISCのみLOADINGを行い、8cmDISCを検出した場合には、排出を行う構成である。

2. Electrical specifications

With a digital LSI (servo processor) employed,

(1) Reliability is improved due to full automatic adjustments carried out:

- Disc variations are absorbed.
- Pickup temperature characteristics and deterioration are absorbed.
- Skillful works such as adjustments are eliminated.

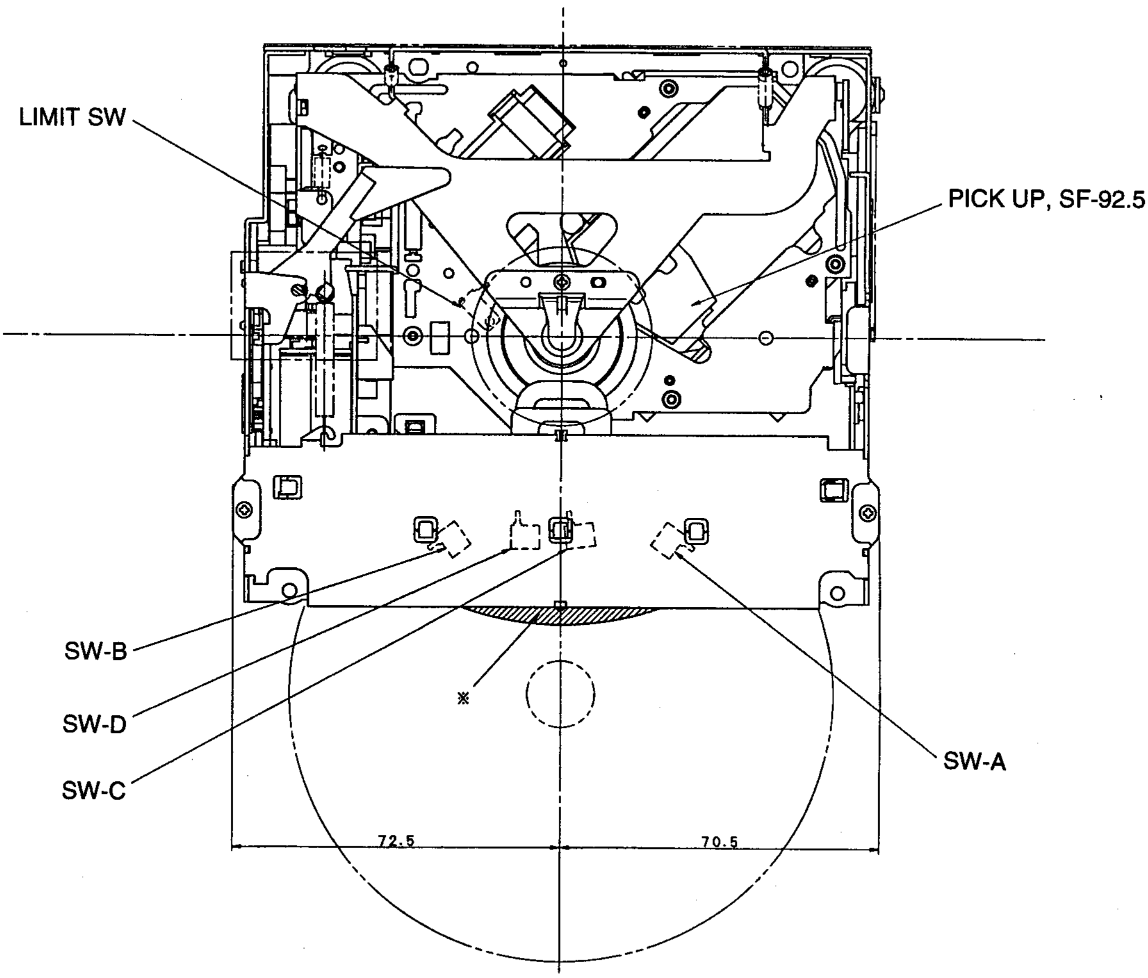
2. 電気仕様

ディジタルサーボLSI（サーボプロセッサー）の採用により、

(1) 完全自動調整による信頼性の向上

- ディスクのバラツキを吸収できる
- ピックアップの温特、劣化を吸収できる
- 調整等の熟練を要する作業を必要としない

<DP24L010 Sensor switch location diagram>
＜DP24L010センサーSW配置図＞



<Function of DP24L010 sensor switches>

	I/O	Name	Function
1	I	SW-A	Detects disc insertion of 8 cm or 12 cm disc. Identifies 8 cm or 12 cm disc. Detects 12 cm disc is pulled out. Detects insertion position of 8 cm disc.
2	I	SW-B	Same as above
3	I	SW-C	Detects eject position of 12 cm disc. Identifies 8 cm or 12 cm disc. Detects reload of 12 cm disc.
4	I	SW-C	Detects completion of chucking operation. Detects disc is in chucking status.
5	I	Limit SW	Detects pickup is moved to inner most position.

＜DP24L010各センサーSWの働き＞

	I/O	名称	機能
1	I	SW-A	8cm/12cm DISCの挿入を検知する 8cm/12cm DISCの認識を行う 12cmDISCが引き抜かれたことを検知する 8cm DISC挿入位置を検知する
2	I	SW-B	同上
3	I	SW-C	12cm DISCのEJECT位置を検知する 8cm/12cm DISCの認識を行う 12cm DISCのRELOADを検知する
4	I	SW-D	チャッキング動作の終了を検知する DISCがチャッキング状態であることを検知する
5	I	Limit SW	ピックアップが内周へ移動したことを検知する

<Operation description>

＜動作説明＞

1. Loading

Of the switches SW-A and SW-B, the switch which detects L→H first is referred as a base switch. And then, if the system detects L→H at another switch (SW-A or SW-B) within 3 sec, the system outputs a signal to LOAD, FWD, and BWD, and rotates the motor in the loading direction.

After starting of the loading, SW-A or SW-B enters operation to detect of H→L. When the system detects L→H at SW-C while both SW-A and SW-B go L, the system understands the disc size is 12 cm and continues the loading. But, when it is not detected the system understands an 8 cm disc is loaded and enters the eject operation.

In case of 12 cm disc, the system detects H→L at SW-D and completes the loading operation.

Monitoring time for switches executing the timing chart is shown on the timing chart. If the system can not detect for that time, it assumes a loading error exists and executes the eject timing chart after waiting of 30ms.

1. Loading

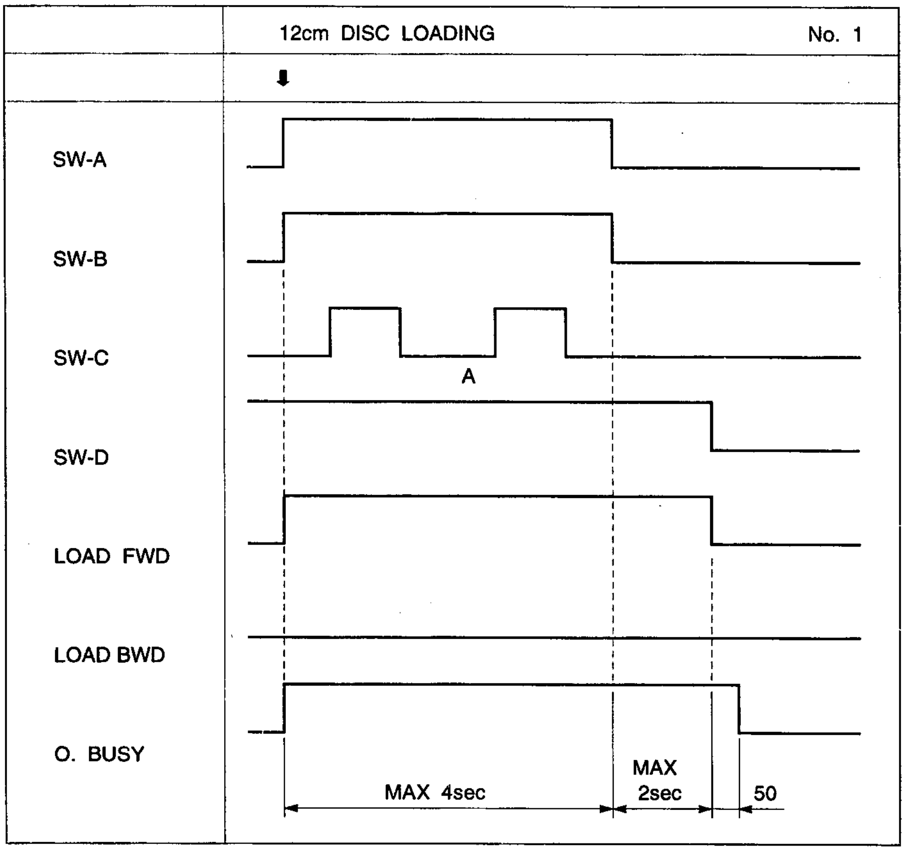
SW-AまたはSW-Bで、早くL→Hを検出したSWをベースのSWとする。その後、3sec以内に別のSW（SW-A or SW-B）がL→Hになったのを検出できれば、LOAD, FWD, BWDに信号を出しMOTORをLOADING方向へ回転させる。

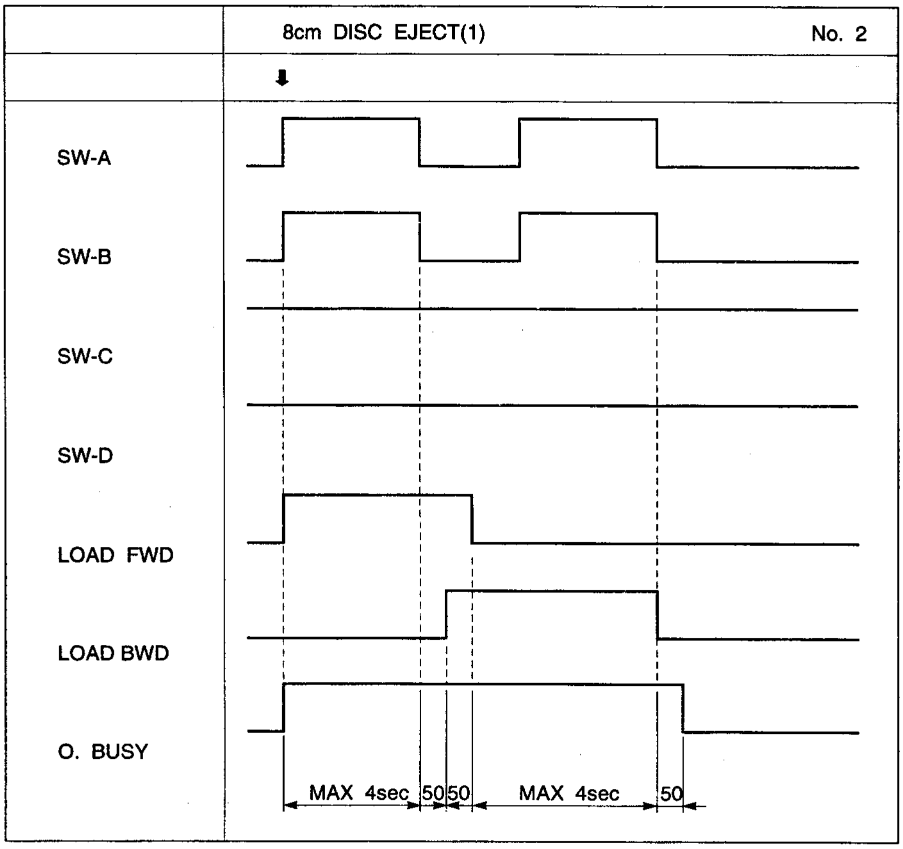
LOADING開始後、次はSW-AまたはSW-BのH→Lを検出に入る。SW-AおよびSW-BがともにLになる間にSW-CのL→Hが検出された場合には12cm DISCとしてLOADINGをそのまま実行するが、検出出来ない場合には、8cm DISCがLOADINGされたものとして排出処理に入る。

12cmの場合には、SW-DのH→Lを検出してLOADING完了とする。

タイミングチャート実行時のSWの監視時間はタイミングチャート上に掲載してある通りとする。その時間に検出出来ない場合にはLOADING ERRORとし、300msのWAITを経た後、EJECTのタイミングチャートを実行する。

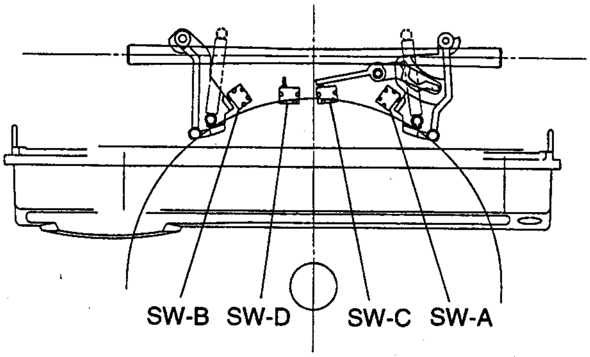
Timing chart
タイミングチャート


12cm DISC LOADING
No. 1
SW-A
SW-B
SW-C
A
SW-D
LOAD FWD
LOAD BWD
O. BUSY
MAX 4sec
MAX
2sec
50

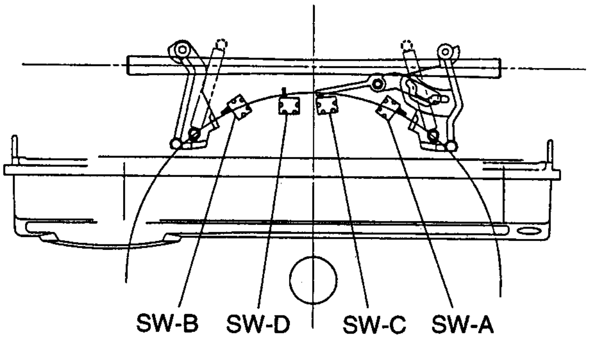

8cm DISC EJECT(1)
No. 2
SW-A
SW-B
SW-C
SW-D
LOAD FWD
LOAD BWD
O. BUSY
MAX 4sec
50
50
MAX 4sec
50

Switch operation in disc loading
ディスク・ローディング時における各スイッチの働き

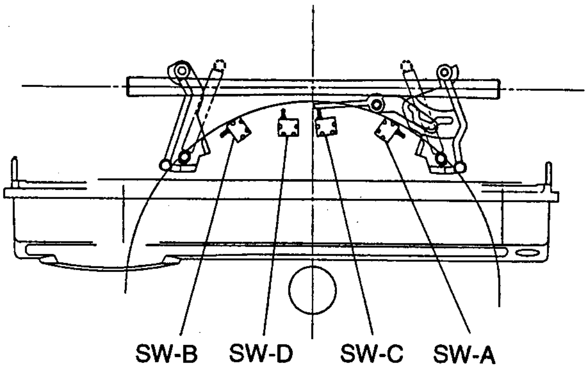
1


SW-B
SW-D
SW-C
SW-A

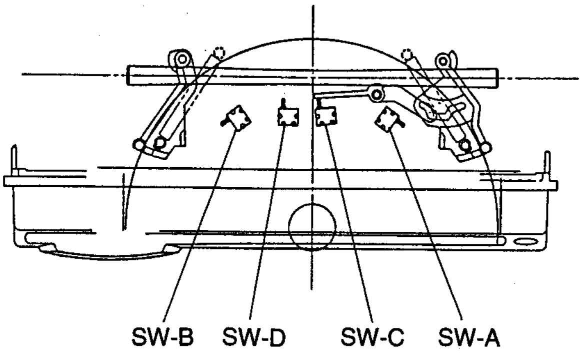
2


SW-B
SW-D
SW-C
SW-A

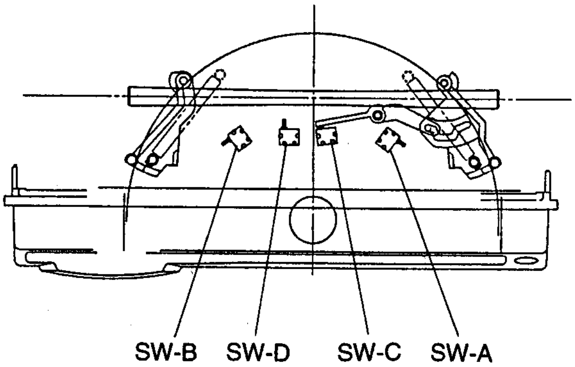
3


SW-B
SW-D
SW-C
SW-A

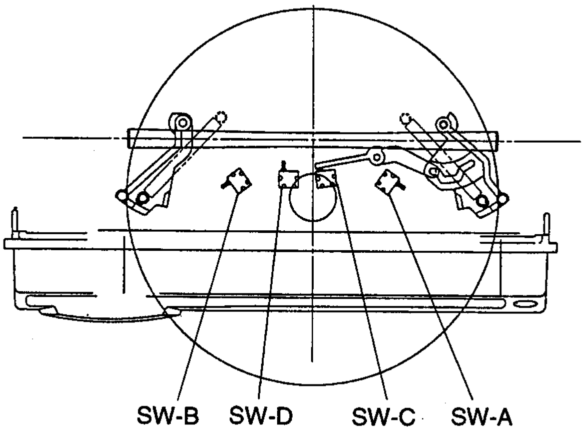
4


SW-B
SW-D
SW-C
SW-A

5


SW-B
SW-D
SW-C
SW-A

6


SW-B
SW-D
SW-C
SW-A

2. Reload

After completion of the eject operation, a Reload condition occurs, and if SW-A and SW-B do not go "L" within 0.5 sec, the system executes No.4 timing chart to start the reloading. (If go "L", completes the eject.)

For other conditions, same as No.1.

※ Reload condition

SW-A and SW-B keep "H" for more than 0.5 sec. (Disc is not removed after completion of the eject operation.)

2. RELOAD

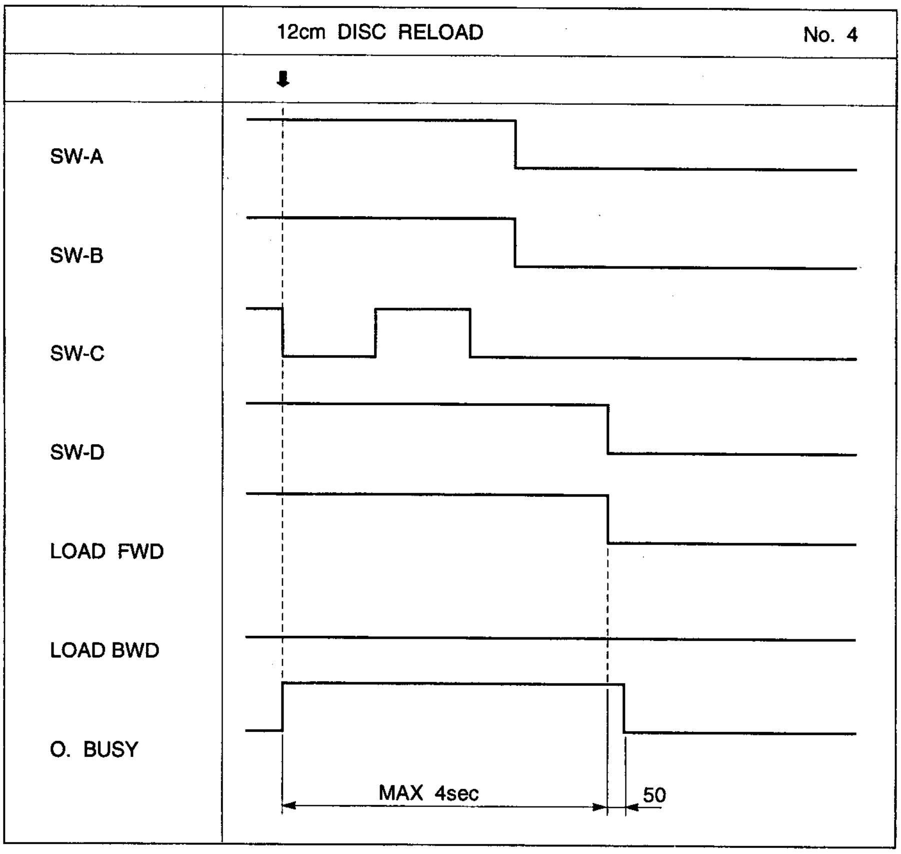
EJECT完了後、RELOAD条件が発生し、且つ0.5sec以内にSW-AおよびSW-Bが“L”にならなかった場合には、No.4のタイミングチャートを実行しRELOADさせる。（なった場合にはEJECT完了とする）

他の条件に関しては、No.1と同様である。

※ RELOAD条件

SW-AおよびSW-BがHのまま0.5sec以上となった場合（EJECT完了後DISCを取らない状態）

Timing chart
タイミングチャート


12cm DISC RELOAD
No. 4
SW-A
SW-B
SW-C
SW-D
LOAD FWD
LOAD BWD
O. BUSY
MAX 4sec
50

3. Eject

The Eject process (by eject key) is not accepted for a mode other than mode shift period.

A 12 cm disc can be ejected by performing No.3 timing chart. That is, in terms of SW monitoring, L→H at SW-C is detected twice.

Eject from loading error mode
As disc size of 8 or 12 can be identified in the loading operation, the eject operation is carried out according to the identification.
In case of 8 cm disc:operations following B in No.2 are carried out, and 8 cm disc, No.3 operations are carried out.

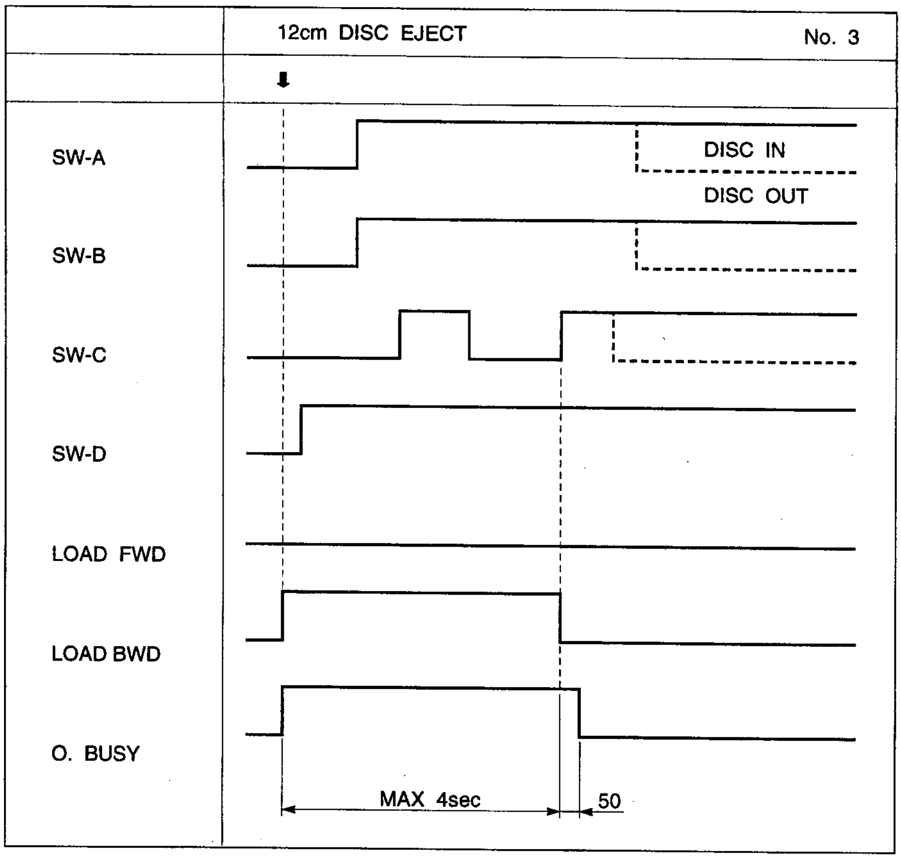
3. EJECT

EJECT処理（EJECT KEYによるもの）は、MODE移行時以外は受け付けるものとする。

No.3のタイミングチャートを実行することにより、12cm DISCをEJECTすることが出来る。SWの監視としては、SW-CのL→Hを2回検出した場合である。

LOADING ERROR MODEからのEJECT
LOADING時に8cm/12cm DISCは判断出来るので、それに合わせたEJECT処理を行う。8cm DISCの場合は、No.2のB以降の処理を行い、12cm DISCの場合は、No.3の処理を行う。

Timing chart
タイミングチャート



4. Operations at ACC OFF

At ACC OFF, if the system is executing the timing chart, it completes the mode and then enters the standby mode.

However, if a DISC IN (disc is not removed) status is detected after completion of Eject, the system enters the standby mode after performing the loading to protect the disc. If a loading error occurs at that time, the system does not shift to the eject mode but shifts after the ACC ON.

Moreover, an OR operation is carried out for SW-A and SW-B and the result is fed to an interruption port. If it is "L"→"H", the system returns from the standby mode and carries out the loading operation.

After completion of the loading or determining the loading error, the system enters the standby mode again.

4. ACC OFF時の処理

ACC OFF時、タイミングチャート実行中であれば、そのMODEを完了してからSTAND BY MODEに入る。

但し、EJECT終了後DISC IN（抜き取られていない）の状態が検出されていたら、DISC保護のため、LOADINGを行ってからSTAND BY MODEに入る。その時LOADING ERRORが発生した場合には、EJECT MODEに以降せず、ACC ONを待って移行することとする。

また、ハードでSW-AとSW-BでORを取り、割り込みPORTに入力する。ACC OFF時にEJECT MODEであり、且つ割り込みPORTが “L” → “H” になった場合は、STAND BYから復帰しLOADING動作を行う。

LOADING完了またはLOADING ERROR確定後、再度STAND BY MODEに入ることとする。

5. Operations at ACC ON

At the ACC ON, previous mode is continued.

5. ACC ON時の処理

ACC ON時は前のMODEを継続することとする。

6. Return from eject error

When both SW-A and SW-B go "H"→"L" in Eject error mode, the system completes the eject operation by assuming the disc is removed.

6. EJECT ERRORよりの復帰

EJECT ERROR MODE時にSW-AおよびSW-Bがともに “H” → “L” になった場合には、DISCが引き抜かれたものとしてEJECT完了とする。

7. Emergency eject process

Eject key is not accepted in all modes. However, when ejecting in a mode other than chucking status (C mode), the system performs the loading operation once and then ejects as in initialization. (To prevent disc from popping out.)

7. 緊急EJECT処理

すべてのMODEにおいてEJECT KEYは受け付けるものとする。

但し、チャッキング状態（C MODE）以外からEJECTする場合には、イニシャライズ時と同じように、いったんLOADINGをしてからEJECTするものとする。（DISCの飛び出しを防ぐため）

8. BATT detection

When the BATT detection port detects BATT OFF, the system enters the standby mode under any conditions. After releasing the standby, the system checks status of the switches and performs initialization process if the status is other than the chucking status (C mode).

8. BATT検知

BATT検知のPORTがBATT OFFを検知したら、無条件にSTAND BY MODEに入る。

STAND BY解除後の処理としては、SWの状態を確認し、チャッキング状態（C MODE）以外の場合には、イニシャライズ処理を行うものとする。

9. Timing allowance

Basically ±10%.

9. タイミングの公差について

±10%を基本とする。

10. Elimination of switch chattering

Performs for 8 ms and 2 time coincidence.

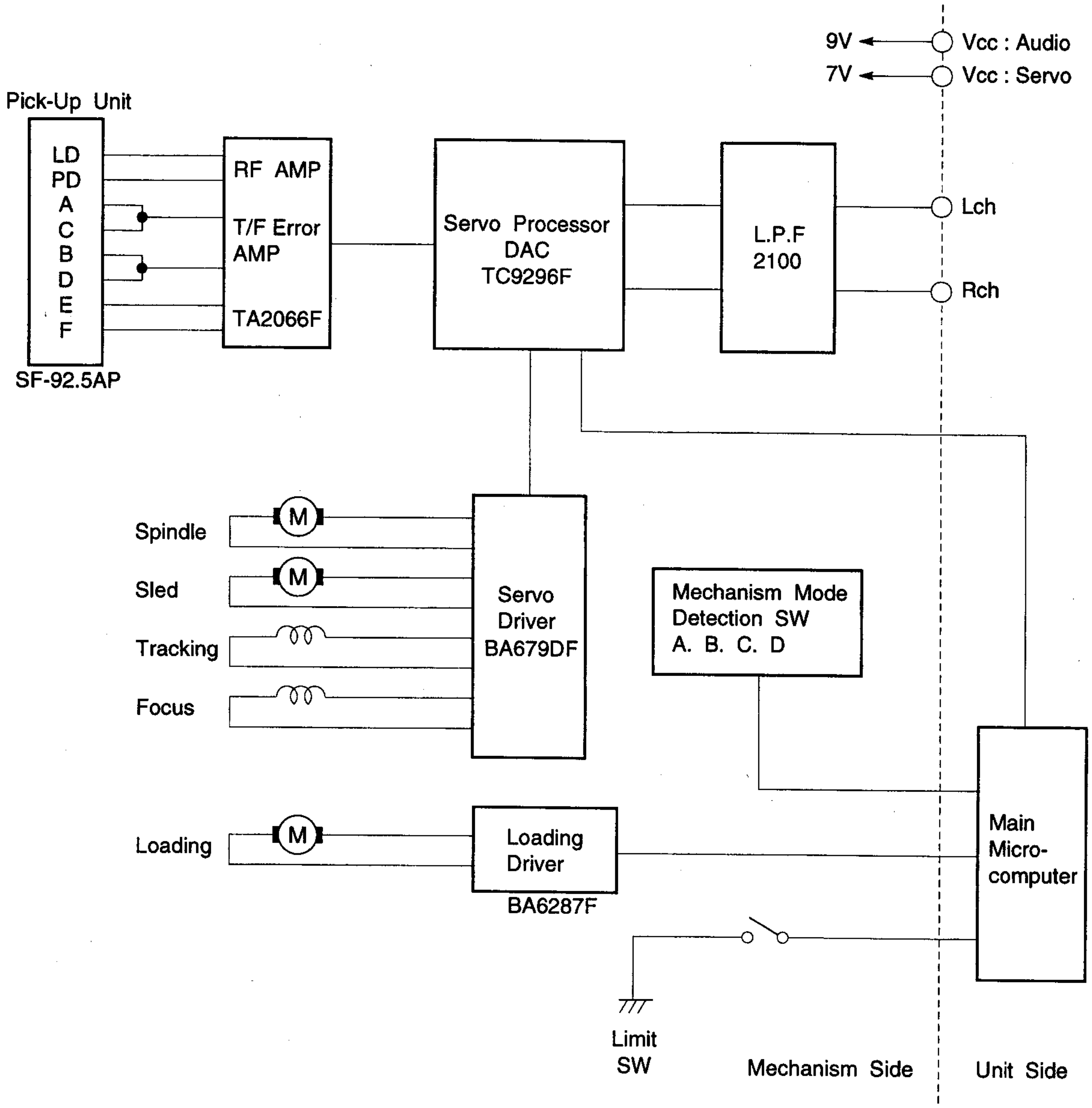
10. SWのチャタリング取り処理について

8msで行い、2度一致とする。

<Power circuit>

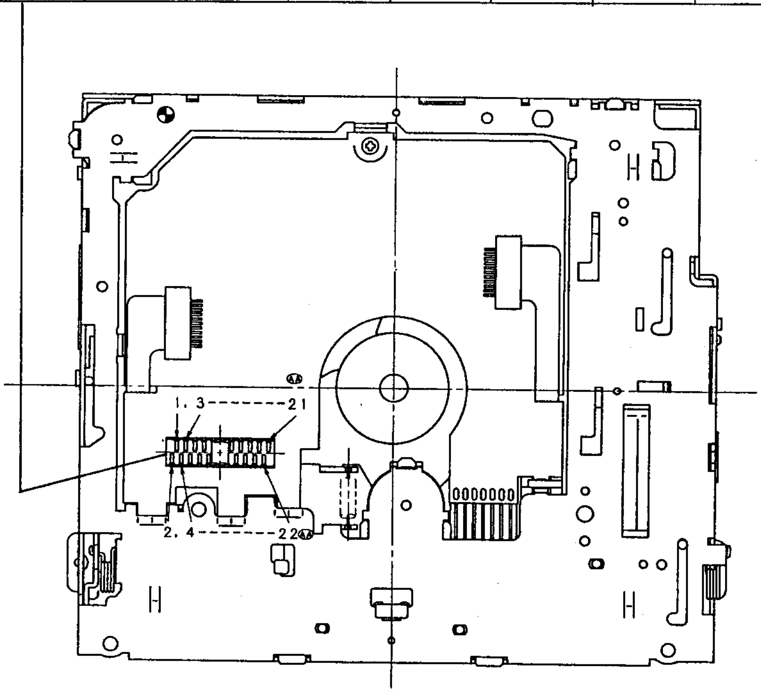
<電気回路>

1. Block diagram
1. ブロックダイアグラム

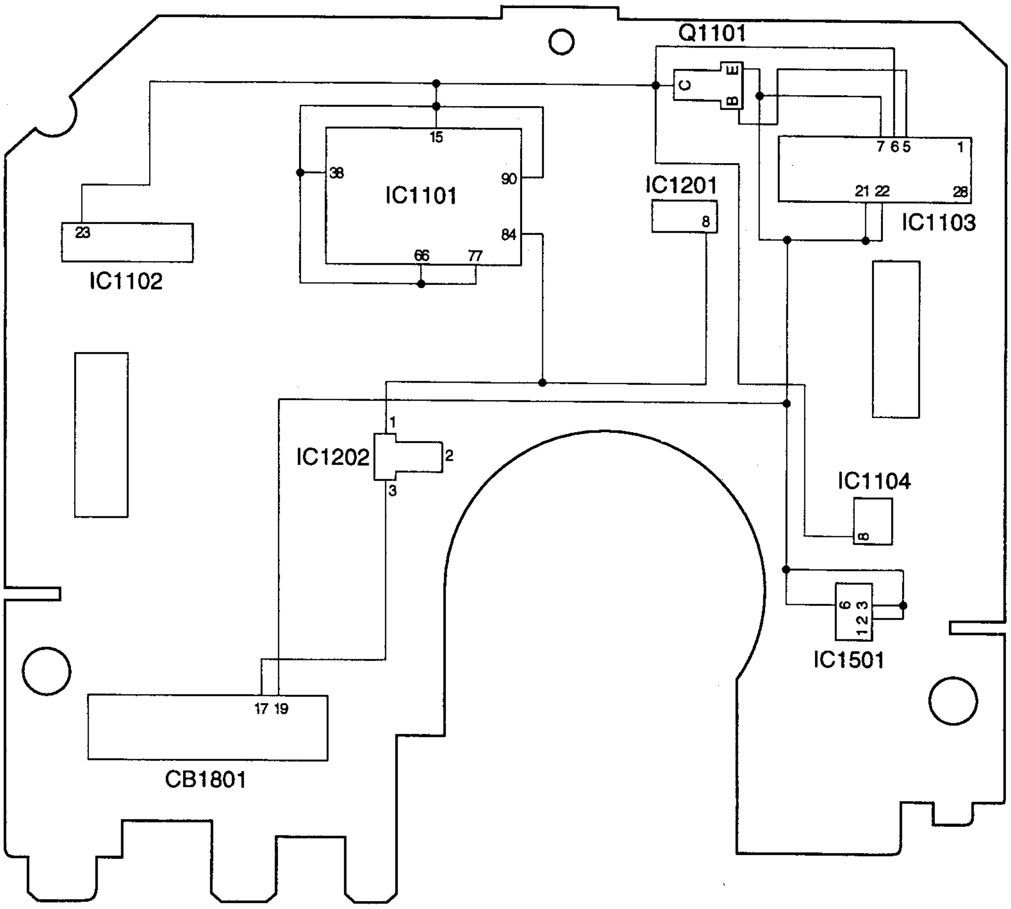

9V
7V
Vcc : Audio
Vcc : Servo
Pick-Up Unit
LD
PD
A
C
B
D
E
F
SF-92.5AP
RF AMP
T/F Error
AMP
TA2066F
Servo Processor
DAC
TC9296F
L.P.F
2100
Lch
Rch
Spindle
Sled
Tracking
Focus
M
M
M
Servo
Driver
BA679DF
Mechanism Mode
Detection SW
A. B. C. D
Loading
Loading
Driver
BA6287F
Main
Micro-
computer
Limit
SW
Mechanism Side
Unit Side

2. Connector terminal location diagram
2. コネクター端子配列表

PIN NO.	1	2	3	4	5	6	7	8	9	10	11
	RESET	SW-A	SW-B	SW-C	SW-D	LIMIT SW	NC	BUS0	BUS1	BUS2	BUS3
PIN NO.	12	13	14	15	16	17	18	19	20	21	22
	/CCE	BUCK	LOAD-FWD	/LOCK	LOAD-RWD	AUDIO +B	L	SERVO +B	S. GND	GND	R

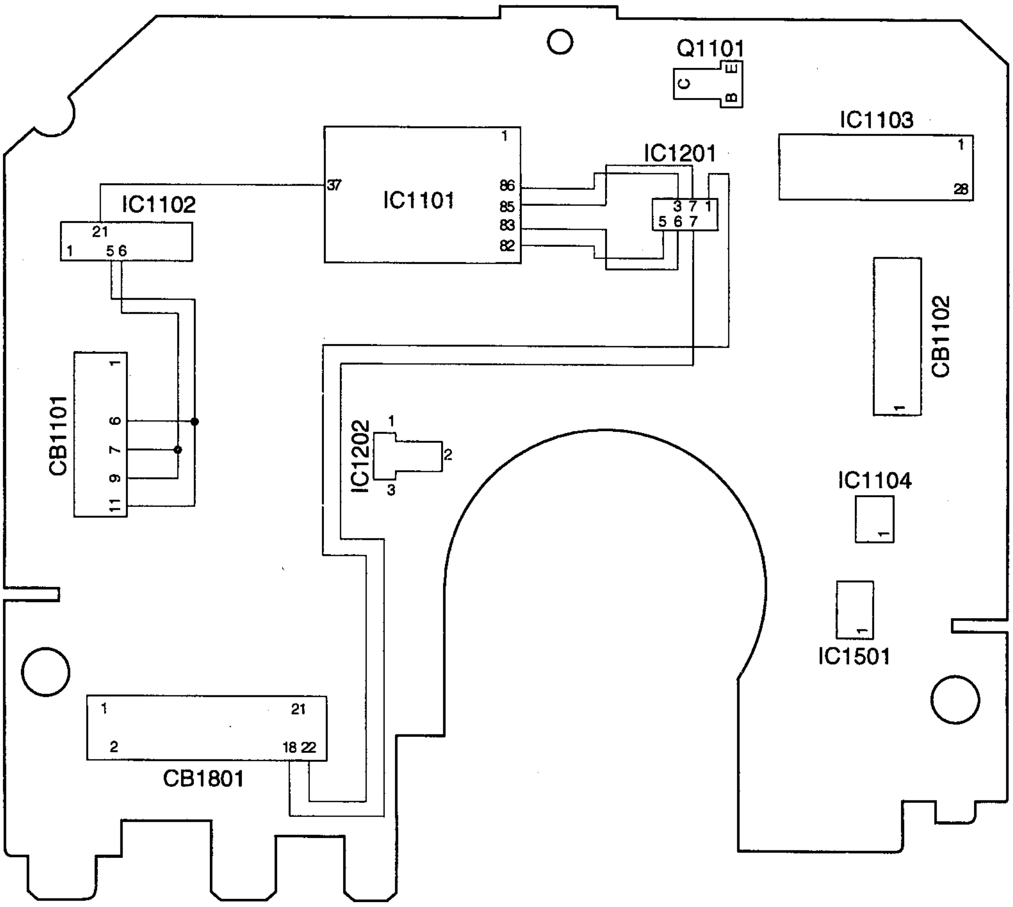


3. Power supply line
3. 電源ライン


Q1101
C
E
B
IC1101
15
38
90
84
66
77
7 6 5
1
21 22
28
IC1103
IC1201
8
23
IC1102
1
IC1202
2
3
IC1104
8
6
1 2 3
IC1501
17 19
CB1801

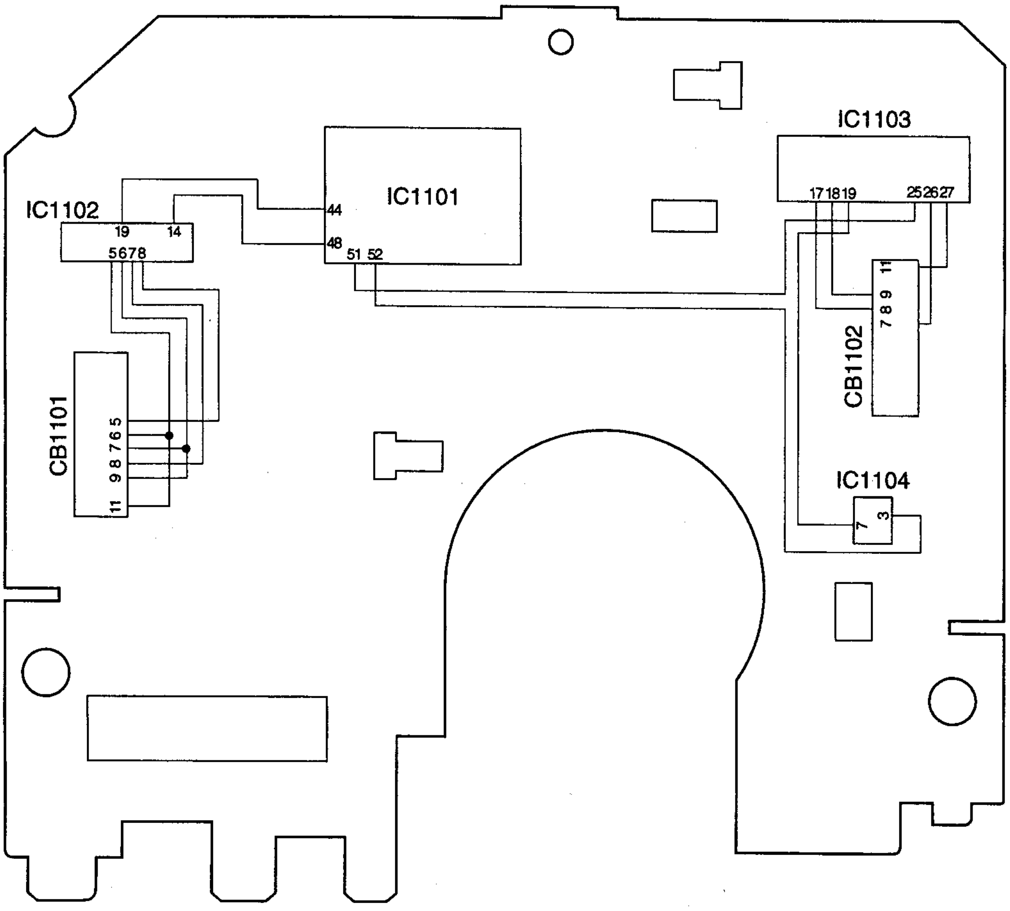
Ref. No.	Function/機能	Input terminal/入力端子	Voltage/電圧
IC1101	Servo processor	⑮ ㊳ (66) (77) (84) (90)	5V
IC1102	RF AMP F/T error AMP	㉓	5V
IC1103	Servo driver	⑦ ㉑ ㉒	7V
IC1104	Tracking error AMP	⑧	5V
IC1201	Low pass filter	⑧	5V
IC1202	Regulator	③	9V
Q1101	Regulator	Emitter	7V
IC1501	Loading motor driver	② ③ ⑥	7V

4. Signal line
4. 信号ライン


Q1101
C
E
B
IC1103
1
28
IC1201
3 7 1
5 6 7
IC1101
1
37
86
85
83
82
IC1102
21
1
5 6
CB1101
1
6
7
9
11
CB1102
1
IC1202
1
2
3
IC1104
1
IC1501
1
CB1801
1
21
2
18 22

Ref. No.	Function/機能	Input terminal/入力端子	Output teminal/出力端子
IC1101	Servo processor	㊲	(82) (83) (85) (86)
IC1102	RF AMP F/T error AMP	⑤ ⑥	㉑
IC1201	Low pass filter	② ③ ⑤ ⑥	① ⑦

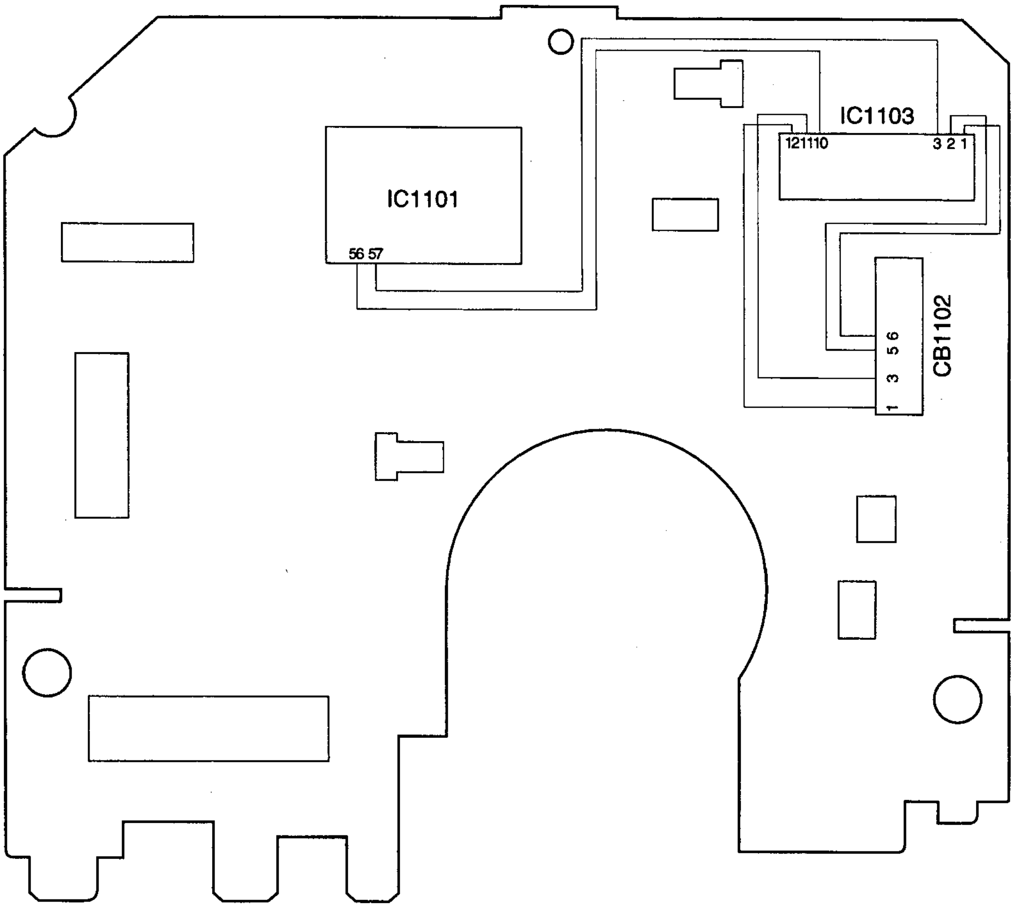
5. Focus/Tracking control
5. フォーカストラッキングコントロール


IC1103
17 18 19
25 26 27
IC1101
44
48
51 52
IC1102
19
14
5678
CB1101
11 9 8 7 6 5
CB1102
7 8 9 11
IC1104
7
3

Ref. No.	Function/機能	Input terminal/入力端子		Output teminal/出力端子	
		Focus	Tracking	Focus	Tracking
IC1101	Servo processor	㊹	㊽	(51)	(52)
IC1102	RF AMP F/T error AMP	⑤ ⑥	⑦ ⑧	⑲	⑭
IC1103	Servo driver	㉕	⑲	㉖ ㉗	⑰ ⑱
IC1104	Tracking error AMP		③		⑦

6. Sled/Spindle control

6. スレッド／スピンドルコントロール


IC1103
12 11 10
3 2 1
IC1101
56 57
CB1102
1 3 5 6

Ref. No.	Function/機能	Input terminal/入力端子		Output teminal/出力端子	
		Sled	Spindle	Sled	Spindle
IC1101	Servo processor			(57)	(56)
IC1103	Servo driver	③	⑩	① ②	⑪ ⑫

Component Disassembly and Assembly Notes
機能部品の分解方法及び組立上の注意

1. Switch/Motor P.C.Board disassembly

(1) Remove two screws ① and the spring ②, remove the Assy., Chassis Top. (See Figure 1)

(2) Remove two springs ③, remove the Assy., Arm Disc Guide. (See Figure 1)

(3) Remove five Hooks (A), the parallel wire and two wires. (See Figure 1)
The Switch/Motor P.C.Board can be removed.

1. スイッチ／モーター基板の分解方法

(1) 2本のネジ①とスプリング②を外し、シャーシ・トップ組立を外します。(1図参照)

(2) 2本のスプリング③を外し、アーム・ディスク・ガイド組立を外します。(1図参照)

(3) 5箇所のフック (A)、パラレル・ワイヤー、2本のワイヤーを外します。
以上で、スイッチ／モーター基板は外れます。

2. DP-Main P.C.Board disassembly

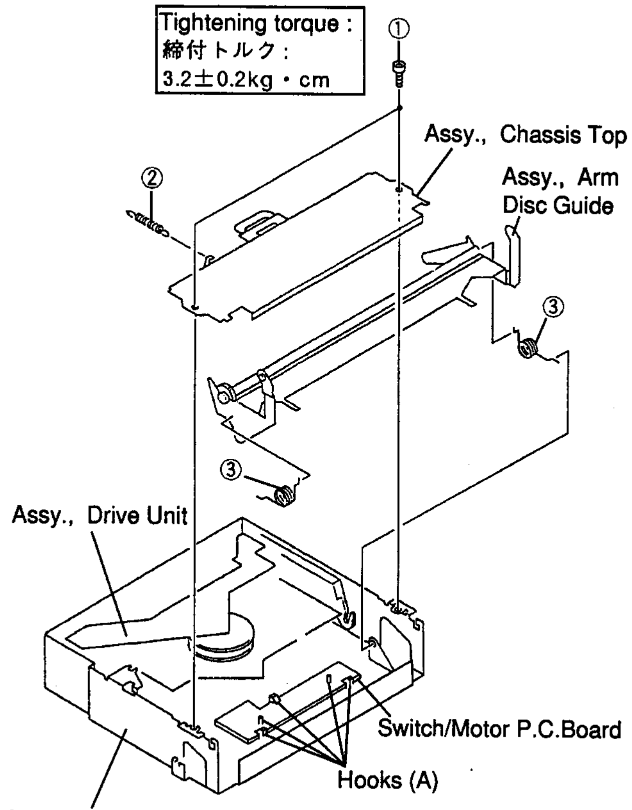
(1) Remove the solder (A) and a screw ④. (See Figure 2)

(2) Remove all connectors connected to the DP-Main P.C.Board.
The DP-Main P.C.Board can be removed.

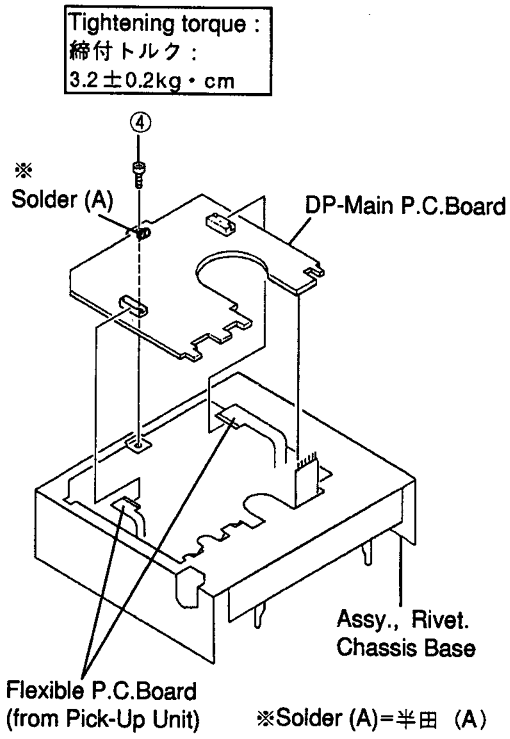
2. DP-メイン基板の分解方法

(1) 半田 (A) と1本のネジ④を外します。(2図参照)

(2) DP-メイン基板につながる全てのコネクターを外します。
以上で、DP-メイン基板は外れます。


Tightening torque :
締付トルク :
3.2±0.2kg・cm
①
②
Assy., Chassis Top
Assy., Arm Disc Guide
③
③
Assy., Drive Unit
Switch/Motor P.C.Board
Hooks (A)
Assy., Rivet. Chassis Base

<Figure 1>
<1図>


Tightening torque :
締付トルク :
3.2±0.2kg・cm
④
※
Solder (A)
DP-Main P.C.Board
Assy., Rivet. Chassis Base
Flexible P.C.Board (from Pick-Up Unit)

※Solder (A)=半田 (A)

<Figure 2>
<2図>

3. Assy., Drive Unit disassembly

(1) Remove the Lever End, the Slider Lock (R) and the Arm Lock (R). (See Figure 3)

(2) Remove three springs ⑤, pull up the Assy., Drive Unit. (See Figure 3)
The Assy., Drive Unit can be removed.

<Assembly note>

- Move the Slider Load fully in the direction indicated by the arrow. (See Figure 3)

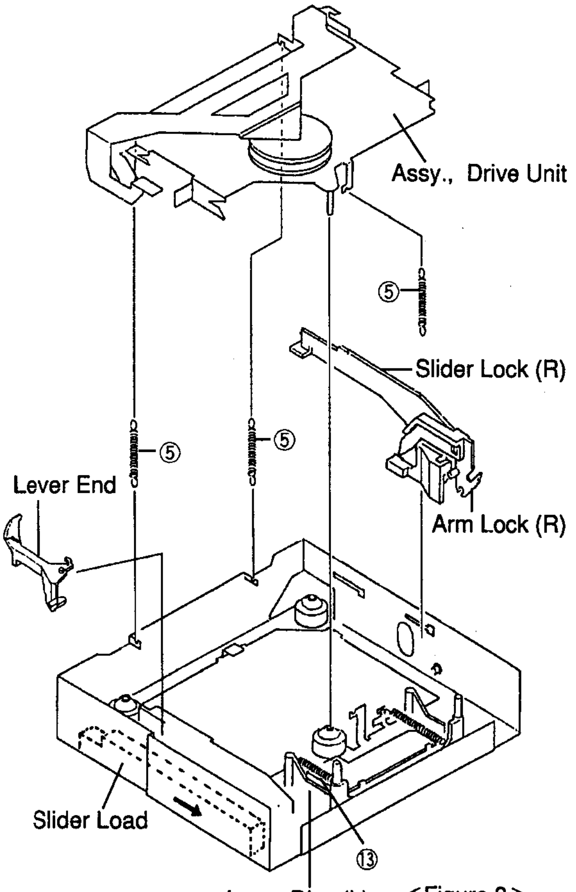
3. ドライブ・ユニット組立の分解方法

(1) レバー・エンド、スライダー・ロック（R)、アーム・ロック（R）を外します。(3図参照)

(2) 3本のネジ ⑤ を外し、ドライブ・ユニット組立を外します。(3図参照)
以上で、ドライブ・ユニット組立は外れます。

<組立上の注意>

- スライダー・ロードが矢印の方向へ一杯に移動した状態で組み立てて下さい。(3図参照)


Assy., Drive Unit
⑤
Slider Lock (R)
⑤
⑤
Lever End
Arm Lock (R)
Slider Load
⑬
Lever Disc (L)

<Figure 3>
<3図>

4. Assy., Motor Spindle (M1302) disassembly

(1) Remove the spring ⑥, remove the Assy., Arm Clamp. (See Figure 4)

(2) Move the Pick-Up Unit (HD1201) fully in the direction indicated by the arrow, remove two screws ⑦. (See Figure 4)

(3) Remove two wires connected to the FPC DP-L Control P.C.Board.
The Assy., Motor Spindle (M1302) can be removed.

<Assembly notes>

- Always wear an electrostatic discharge band.
- Never touch the lens of the Pick-Up Unit.

4. モーター・スピンドル組立（M1302）の分解方法

(1) スプリング⑥ を外し、アーム・クランプ組立を外します。(4図参照)

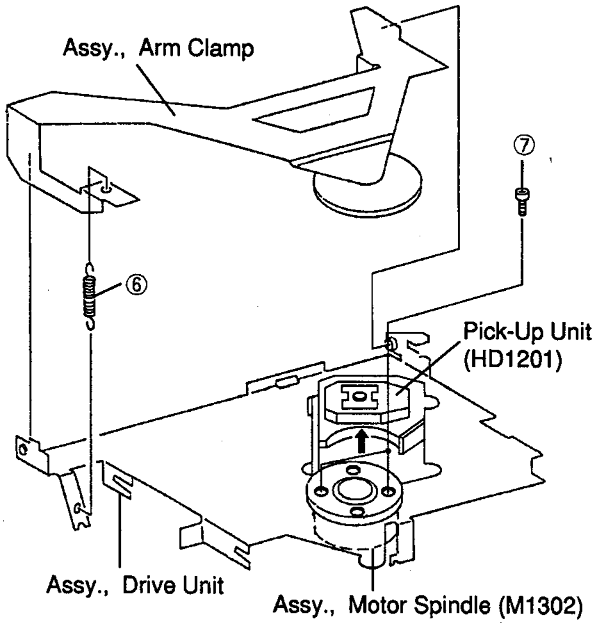
(2) ピック・アップ・ユニット(HD1201) を矢印の方向へ一杯に動かし、2本のネジ⑦を外します。(4図参照)

(3) FPC DP-Lコントロール基板につながるワイヤーを外します。
以上で、モーター・スピンドル組立（M1302）は外れます。

<組立上の注意>

- 静電バンドを付けて作業して下さい。
- ピック・アップ・ユニットのレンズには絶対に手を触れないで下さい。

Tightening torque :
締付トルク :
1.5±0.2kg・cm


Assy., Arm Clamp
⑦
⑥
Pick-Up Unit
(HD1201)
Assy., Drive Unit
Assy., Motor Spindle (M1302)

<Figure 4>
<4図>

5. Pick-Up Unit (HD1201) disassembly

- Wear an electrostatic discharge band, when disassembling the Pick-Up Unit. Do not touch the lens or the P.C.Board.

(1) Remove two screws ⑧, remove the Spring Nut (A), (B). (See Figure 5)

(2) Remove two Hooks (B), remove the FPC DP-L Control P.C.Board. (See Figure 5)

(3) Remove a screw ⑨, remove the Spring Multi. (See Figure 5)
The Shaft Pick-Up (2) can be removed.

(4) Remove a screw ⑩, remove the Shaft Pick-Up (1). (See Figure 5)

(5) Remove the Solder (B) connected between the FPC DP-L Control P.C.Board and the Flexible P.C.Board (from the Pick-Up Unit). (See Figure 5-3)
NOTE : Do not cut the Flexible P.C.Board by removing the Solder (B).
The Pick-Up Unit (HD1201) can be removed.

<Assembly notes>

- Always wear an electrostatic discharge band.
- Never touch the lens or the P.C.Board of the Pick-Up Unit.
- Form two Flexible P.C.Boards from the Pick-Up Unit as shown in Figures 5-1and 5-2.

5. ピック・アップ・ユニット（HD1201）の分解方法

- ピック・アップ・ユニットを外す際は、静電バンドを付けて作業して下さい。また、レンズや基板には手を触れないで下さい。

(1) 2本のネジ⑧を外し、スプリング・ナット（A）、（B）を外します。（5図参照）

(2) 2箇所のフック（B）を外し、FPC DP-Lコントロール基板を外します。（5図参照）

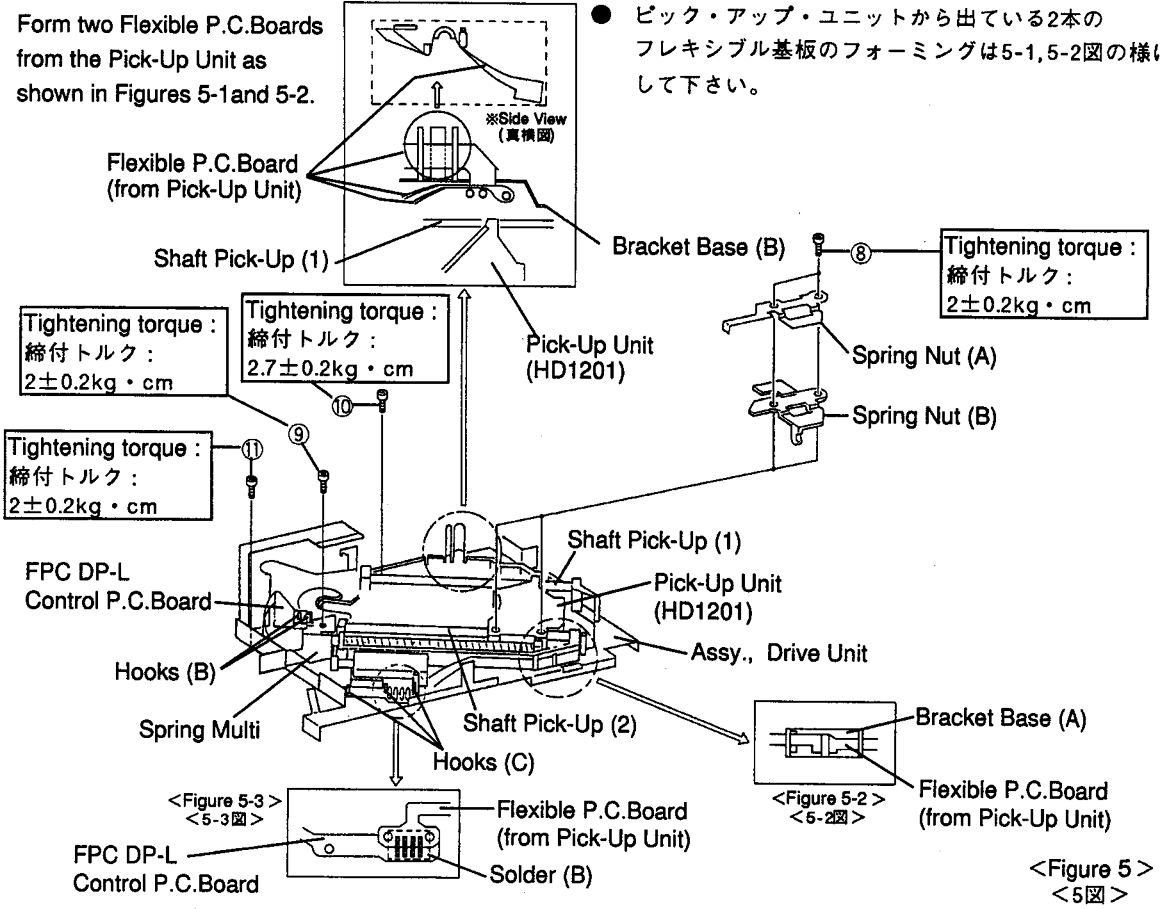
(3) 1本のネジ⑨を外し、スプリング・マルチを外します。（5図参照）
以上で、シャフト・ピック・アップ（2）は外せます。

(4) 1本のネジ⑩を外し、シャフト・ピック・アップ（1）を外します。（5図参照）

(5) FPC DP-Lコントロール基板とフレキシブル基板を接続している半田（B）を外します。（5-3図参照）
注）半田（B）を外す際に、フレキシブル基板を損傷しない様、注意して下さい。
以上で、ピック・アップ・ユニット（HD1201）は外れます。

＜組立上の注意＞

- 静電バンドを付けて作業して下さい。
- ピック・アップ・ユニットのレンズや基板には絶対に手を触れないで下さい。
- ピック・アップ・ユニットから出ている2本のフレキシブル基板のフォーミングは5-1,5-2図の様にして下さい。


※Side View
(真横図)
Flexible P.C.Board
(from Pick-Up Unit)
Shaft Pick-Up (1)
Bracket Base (B)
Pick-Up Unit
(HD1201)
⑧
Tightening torque :
締付トルク :
2±0.2kg • cm
Spring Nut (A)
Spring Nut (B)
Tightening torque :
締付トルク :
2±0.2kg • cm
Tightening torque :
締付トルク :
2.7±0.2kg • cm
⑩
⑨
Tightening torque :
締付トルク :
2±0.2kg • cm
⑪
Shaft Pick-Up (1)
Pick-Up Unit
(HD1201)
FPC DP-L
Control P.C.Board
Assy., Drive Unit
Hooks (B)
Spring Multi
Shaft Pick-Up (2)
Hooks (C)
Bracket Base (A)
Flexible P.C.Board
(from Pick-Up Unit)
Flexible P.C.Board
(from Pick-Up Unit)
FPC DP-L
Control P.C.Board
Solder (B)

<Figure 5-1 ><5-1図>

<Figure 5-3 >
<5-3図>

<Figure 5-2 >
<5-2図>

<Figure 5 >
<5図>

6. Assy., Motor Sled (M1303) disassembly

(1) Remove two screws ⑫ (See Figure 6), remove three Hooks (C) (See Figure 5) and a screw ⑪ (See Figure 5).
The Assy., Motor Sled (M1303) can be removed.

<Assembly notes>

- Mount the Assy., Motor Sled (M1303) so the seal side is correct. (See Figure 6-1)
- Form the FPC DP-L Control P.C.Borad as shown in Figure 6-1.

6. モーター・スレッド組立（M1303）の分解方法

(1) 2本のネジ⑫（6図参照）を外し、3箇所のフック（C）（5図参照）と1本のネジ⑪（5図参照）を外します。
以上で、モーター・スレッド組立（M1303）は外れます。

＜組立上の注意＞

- モーター・スレッド組立（M1303）は、捺印の位置に注意して取り付けて下さい。(6-1図参照)
- FPC DP-Lコントロール基板のフォーミングは6-1図の様にして下さい。

7. Assy., Motor-Worm (M1301) disassembly

(1) Remove the spring ⑬, remove the Lever Disc (L). (See Figure 3)

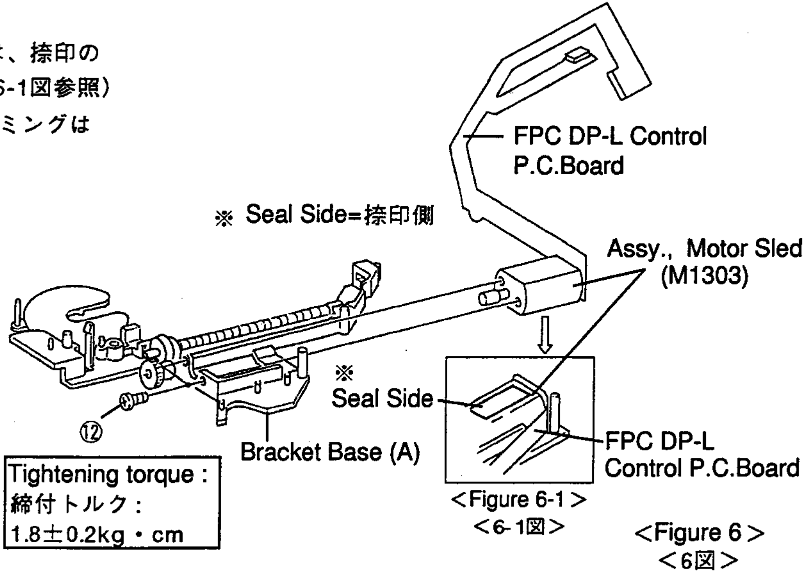
(2) Remove three screws ⑭, remove the Bracket Motor-Wire. (See Figure 7)
The Assy., Motor-Worm (M1301) with the Slider Lock (L) and the Assy., Bracket Motor can be removed completely.

(3) Remove the spring ⑮, remove the Slider Lock (L) and the Arm Lock (L). (See Figure 8)

(4) Remove two screws ⑯. (See Figure 8)
The Assy., Motor-Worm (M1301) can be removed.

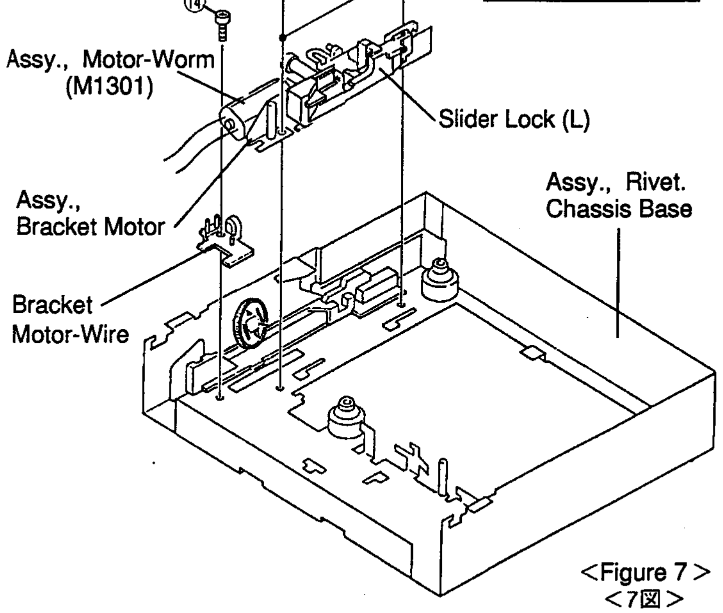
<Assembly notes>

- Mount the Assy., Motor-Worm (M1301) so the seal side is correct. (See Figure 8-1)
- Form the wires of Assy., Motor-Worm (M1301) as shown in Figures 8-1 and 8-2.


FPC DP-L Control
P.C.Board
※ Seal Side=捺印側
Assy., Motor Sled
(M1303)
※
Seal Side
FPC DP-L
Control P.C.Board
⑫
Bracket Base (A)
Tightening torque :
締付トルク :
1.8±0.2kg・cm

<Figure 6-1>
<6-1図>

<Figure 6>
<6図>


Tightening torque :
締付トルク :
3.2±0.2kg・cm
Tightening torque :
締付トルク :
2.7±0.2kg・cm
⑪
⑭
Assy., Motor-Worm
(M1301)
Slider Lock (L)
Assy.,
Bracket Motor
Bracket
Motor-Wire
Assy., Rivet.
Chassis Base

<Figure 7>
<7図>

7. モーター・ウォーム組立（M1301）の分解方法

(1) スプリング⑬を外し、レバー・ディスク（L）を外します。(3図参照)

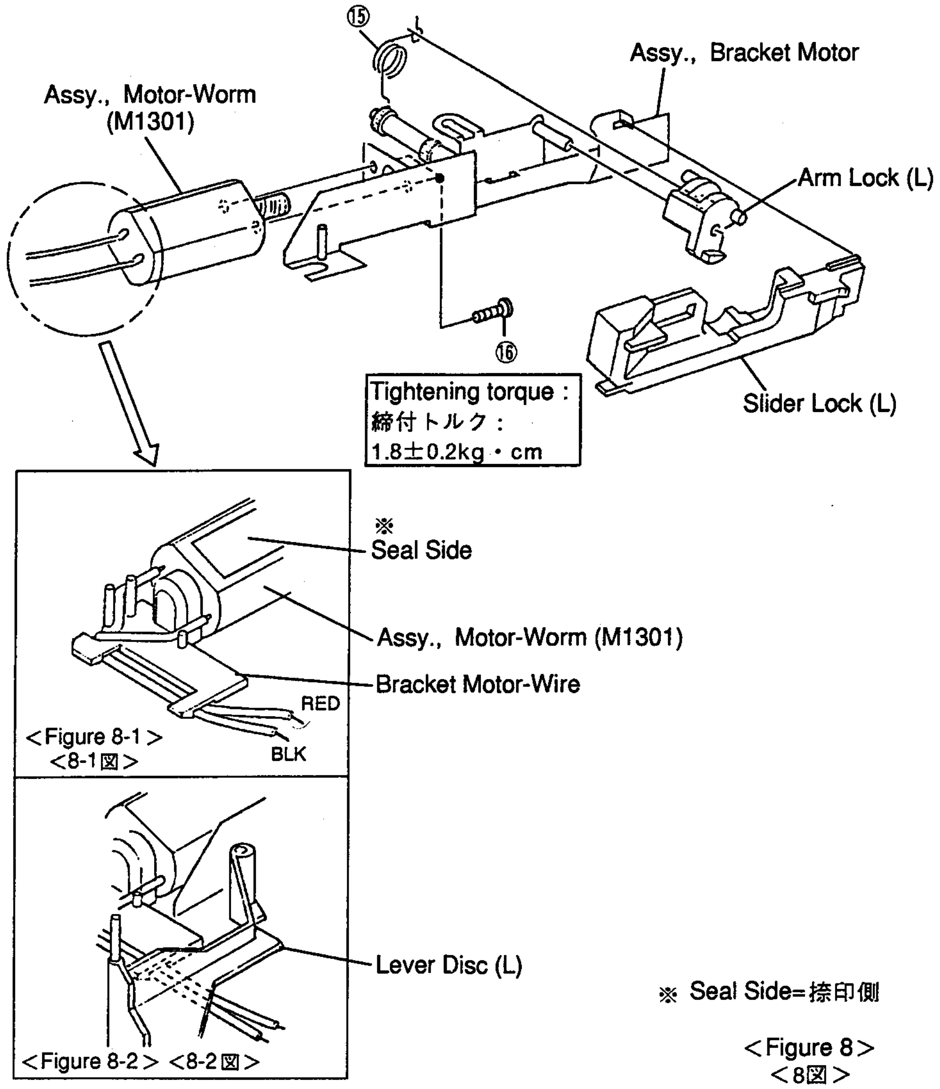
(2) 3本のネジ⑭を外し、ブラケット・モーター・ワイヤーを外します。(7図参照)
モーター・ウォーム組立（M1301）は、スライダー・ロック（L)、ブラケット・モーター組立が付いた状態で一緒に外れます。

(3) スプリング⑮を外し、スライダー・ロック（L）とアーム・ロック（L）を外します。(8図参照)

(4) 2本のネジ⑯を外します。(8図参照)
以上で、モーター・ウォーム組立（M1301）は外れます。

＜組立上の注意＞

- モーター・ウォーム組立（M1301）は、捺印の位置に注意して取り付けて下さい。(8-1図参照)
- モーター・ウォーム組立（M1301）のフォーミングは、8-1,8-2図の様にして下さい。


⑮
Assy., Bracket Motor
Assy., Motor-Worm
(M1301)
Arm Lock (L)
⑯
Tightening torque :
締付トルク :
1.8±0.2kg・cm
Slider Lock (L)
※
Seal Side
Assy., Motor-Worm (M1301)
Bracket Motor-Wire
RED
BLK
Lever Disc (L)

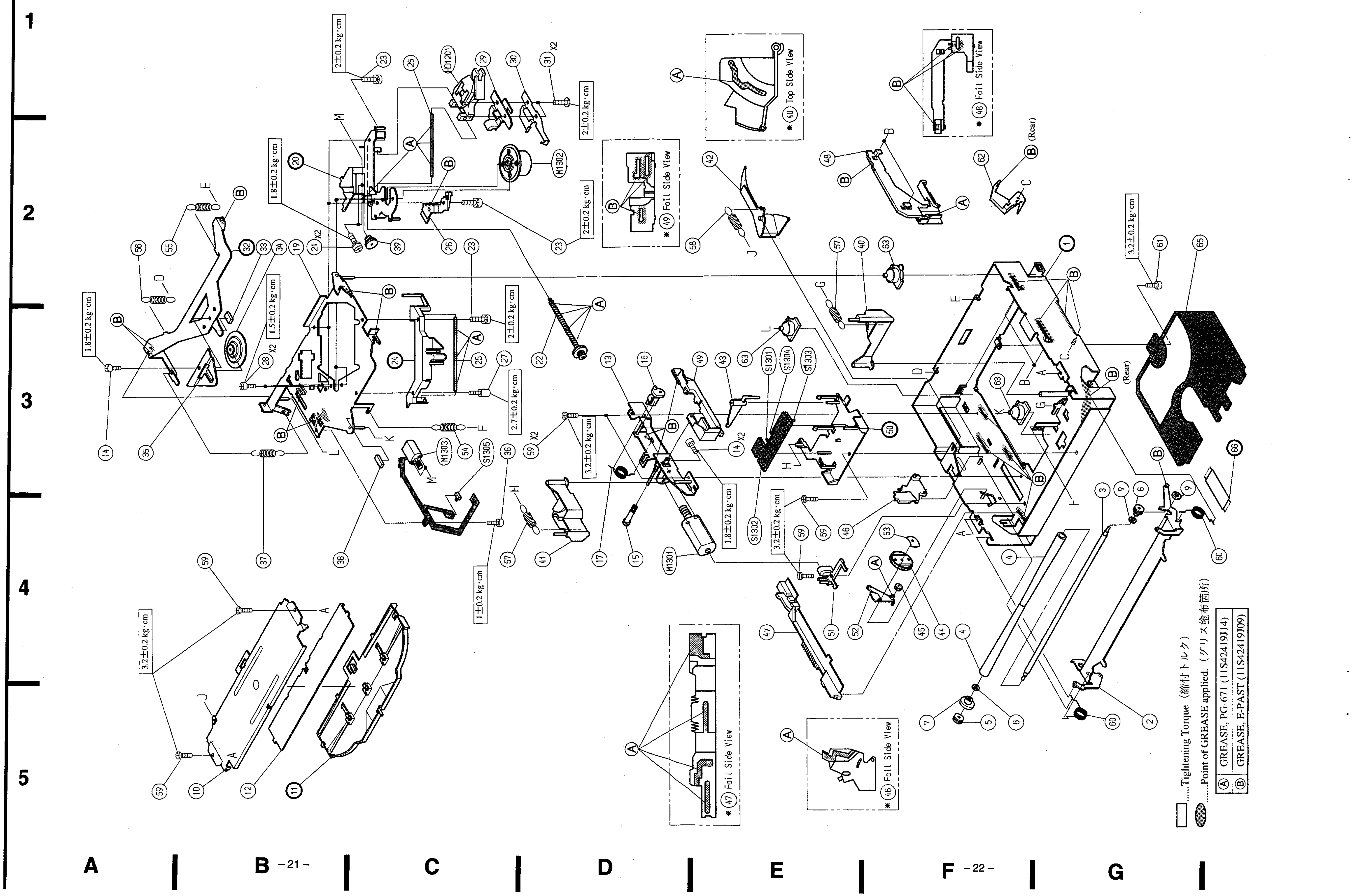
<Figure 8-1> <8-1図>

<Figure 8-2> <8-2図>

※ Seal Side=捺印側

<Figure 8>
<8図>

Exploded View (CD Mechanism)


1
2
3
4
5
A
B
C
D
E
F
G
2±0.2 kg·cm
1.8±0.2 kg·cm
1.5±0.2 kg·cm
2.7±0.2 kg·cm
3.2±0.2 kg·cm
1±0.2 kg·cm
X2
(Rear)
M1201
M1301
M1302
M1303
S1301
S1302
S1303
S1304
S1305
* 40 Top Side View
* 48 Foil Side View
* 49 Foil Side View
* 47 Foil Side View
* 46 Foil Side View
A
B
C
D
E
F
G
H
J
K
L
M
1
2
3
4
5
6
7
8
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65
66

▭ ......Tightening Torque（締付トルク）

● ......Point of GREASE applied.（グリス塗布箇所）

Ⓐ	GREASE, PG-671 (11S42419J14)
Ⓑ	GREASE, E-PAST (11S42419J09)

CD Mechanism Assembly Parts List

NOTE:No parts number on parts list are not supplied.

Symbol No.	Index	Part No.	Description
2	5-G	01B70635W01	Assy., Rivet Arm - Disc
3	4-G	47A70613W01	Shaft, Roller
4	4-F	49A71614W01	Roller, DP - L
5	5-F	43A70630W01	Bush, Roller (R)
6	5-G	43A70631W01	Bush, Roller (L)
7	5-F	44A70617W01	Gear (C)
8	5-F	04S40075G03	Washer, Flat (M1.7)
9	4-G	04S40075G09	Washer, Flat (M2.6)
10	5-B	27C70602W01	Chassis, Top
12	5-B	15C70632W01	Guide, Top
13	3-D	01A70636W01	Assy., Rivet Bracket Motor
14		03S94385F19	Screw, Nylok Pan (M2 ×2.5)
15	4-D	44B80632W01	Gear, Idler - S
16	3-D	45B70624W01	Arm, Lock (L)
17	4-D	41A71510W01	Spring, Arm
19	2-B	01A70580W01	Assy., Chassis Pick - Up
21	2-B	03S40014G07	Screw, W / Washer (M2 ×4)
22	3-D	01V73300W39	Assy., Shaft Screw
23		03S40014G84	Screw, W / Washer (M2 ×6.5)
25		47A50698W01	Shaft, Pick - Up
26	2-C	41A70587W01	Spring, Multi
27	3-C	03A75516W02	Screw, Drive (M2 ×5)
28	3-B	03S94385F03	Screw, Nylok Pan (M1.7 ×4)
29	1-C	44B70592W01	Spring, Nut (B)
30	1-D	41A70586W01	Spring, Nut (A)
31	1-D	03S94385F25	Screw, Nylok Flat (M2 ×3.5)
33	2-B	43A41656W01	Spacer, UHMW - PE
34	2-B	01V73300W37	Assy., Table Clamper
35	3-A	07A70588W01	Stopper, Clamp
36	3-C	03S72235F76	Screw, Pan (M2 ×2)
37	4-B	41B70640W06	Spring, Pull
38	4-B	75S50638W99	Rubber, Pad Chassis
39	2-C	44A70590W01	Gear, Middle
40	2-E	45B70626W01	Lever, Disc (R)
41	4-D	45B70627W01	Lever, Disc (L)
42	2-E	45B70628W01	Lever, End
43	3-E	45A70629W01	Lever, Switch
44	4-F	44A70615W01	Gear (A)
45	4-F	44A70616W01	Gear (B)
46	4-E	45B70619W01	Lever, Cam
47	4-E	45C70620W01	Slider, Load
48	2-E	45B70621W01	Slider, Lock (R)
49	3-E	45B70622W01	Slider, Lock (L)
51	4-E	07A70633W01	Bracket, Motor - Wire
52	4-E	01A70637W01	Assy., Rivet Arm Timing

Symbol No.	Index	Part No.	Description
53	4-F	41A70606W01	Spring, Washer
54	3-C	41B70640W01	Spring, Pull
55	2-A	41B70640W02	Spring, Pull
56	2-A	41B70640W03	Spring, Pull
57		41B70640W04	Spring, Pull
58	2-D	41B70640W05	Spring, Pull
59		03S38013W29	Screw, Flat (M2 ×3.5)
60		41A71509W01	Spring, Roller
61	2-G	03S38013W22	Screw, Pan (M2 ×4)
62	2-F	45B70623W01	Arm, Lock (R)
63		75C71171W02	Damper, DP - L
65	2-G	14A80680W01	Insulator, DP - Main

Miscellaneous

HD1201		88T55261W01	Pick - Up Unit
M1301		01V73300W33	Assy., Motor - Worm (7V - 370mA)
M1302		01V73300W35	Assy., Motor Spindle (2V- 90mA)
M1303		01V73300W38	Assy., Motor Sled (7V - 370mA)
S1301		40T25956W02	Switch, Detector (DISC CHUCKING POSITION)
S1302		40T25956W02	Switch, Detector (DISC LOAD)
S1303		40T25956W01	Switch, Detector (DISC LOAD)
S1304		40T25956W02	Switch, Detector (DISC END)
S1305		40T71025F03	Switch, Detector (LIMIT)

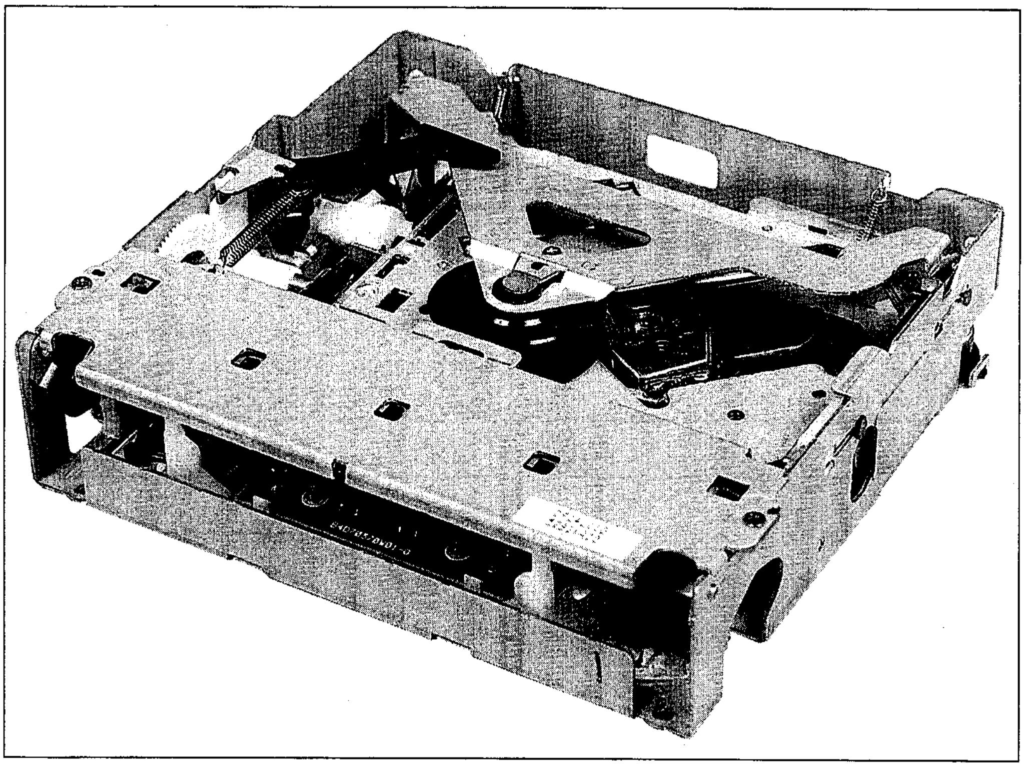
ALPINE®

SERVICE MANUAL

CD Player Mechanism

ADDENDUM & REVISED

- This manual is described on DP23L010 only. The DP23L010 is developed from DP24L010. For information that is not mentioned in this service manual, refer to the Service Manual • DP-L SERIES (68E23246S01).+ U/9008
- 当マニュアルはDP23L010についてのみ記載しております。又、DP24L010がベースモデルとなっておりますので、相違部分のみ記載しております。詳細についてはDP-L SERIES (68E23246S01)を参照願います。



DP-L SERIES

Contents

CD Mechanism Cabinet Assembly Parts List (Only Difference) 2
Exploded View (CD Mechanism) .... 3 to 4

Mechanism Function Description
Component Disassembly and Assembly Notes
} Refer to the Service Manual for DP-L Series (Part No. 68E23246S01).

CD Mechanism Assembly Parts List

NOTE: For the parts not mentioned, refer to the Service Manual for DP-L SERIES (Part No.68E23246S01).

Symbol No.	Index	Part No.	Description
61	2-G	03S38013W25	Screw, Pan (M2X4)

Symbol No.	Index	Part No.	Description
Miscellaneous			
HD1201		81B81296W01	Pick-Up Unit
M1302		01V94200W03	Assy., Spindle Motor (3V-90mA)

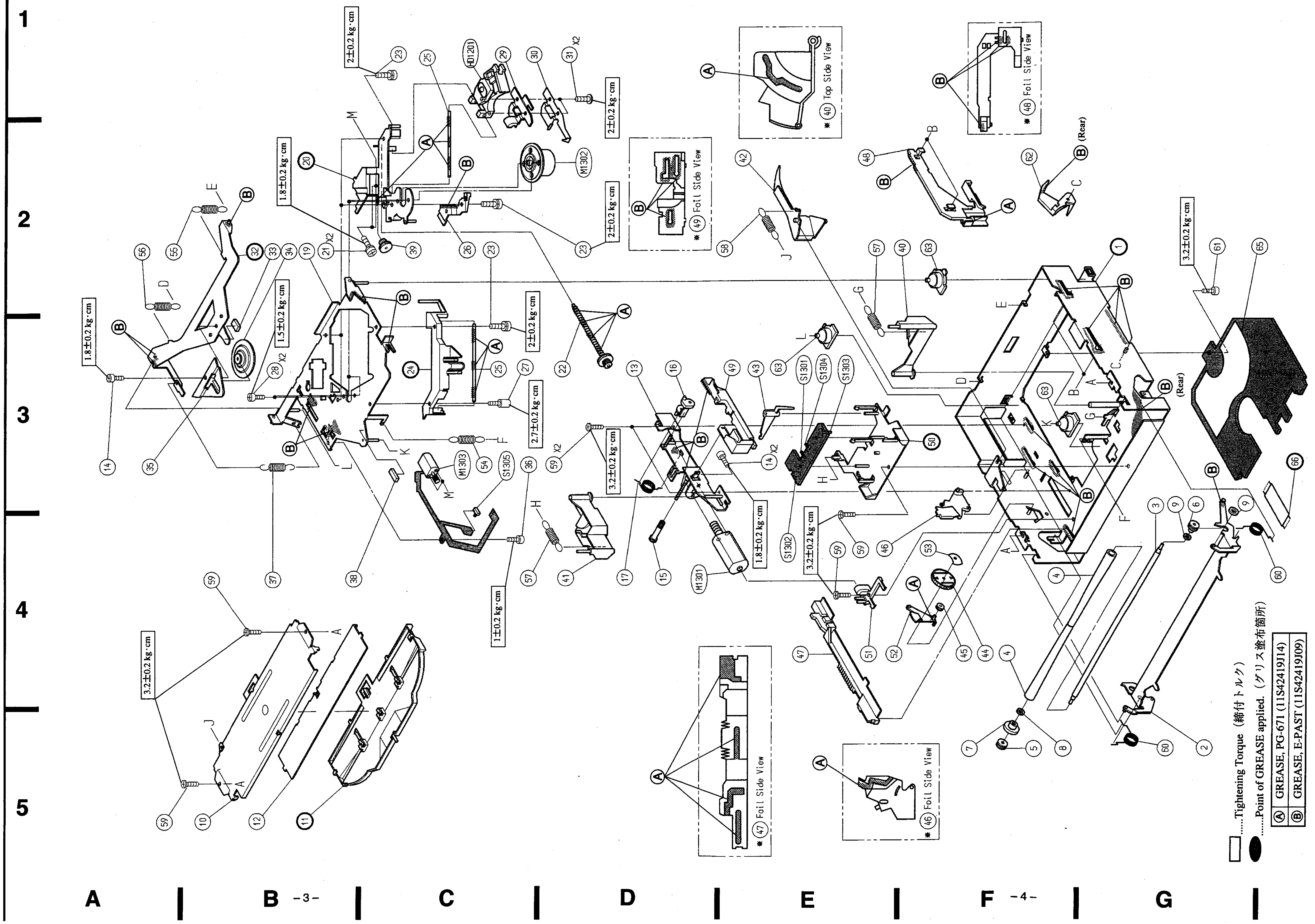
CDメカニズム関係部品表

※ 記載されていない部品については、サービスマニュアル・DP-L SERIES (68E23246S01) を参照願います。

記号	索引	部品番号	部品名	標準卸価格
61	2-G	03S38013W25	Screw, Pan (M2X4)	45

記号	索引	部品番号	部品名	標準卸価格
その他の電気部品				
HD1201		81B81296W01	Pick-Up Unit	—
M1302		01V94200W03	Assy., Spindle Motor (3V-90mA)	1,530

Exploded View (CD Mechanism)



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A
B
C
D
E
F
G
2±0.2 kg·cm
1.8±0.2 kg·cm
1.5±0.2 kg·cm
2.7±0.2 kg·cm
3.2±0.2 kg·cm
1±0.2 kg·cm
X2
HD1201
M1301
M1302
M1303
S1301
S1302
S1303
S1304
S1305
(Rear)
✱ 40 Top Side View
✱ 48 Foil Side View
✱ 49 Foil Side View
✱ 47 Foil Side View
✱ 46 Foil Side View

▭……Tightening Torque（締付トルク）

●……Point of GREASE applied.（グリス塗布箇所）

Ⓐ	GREASE, PG-671 (11S42419J14)
Ⓑ	GREASE, E-PAST (11S42419J09)

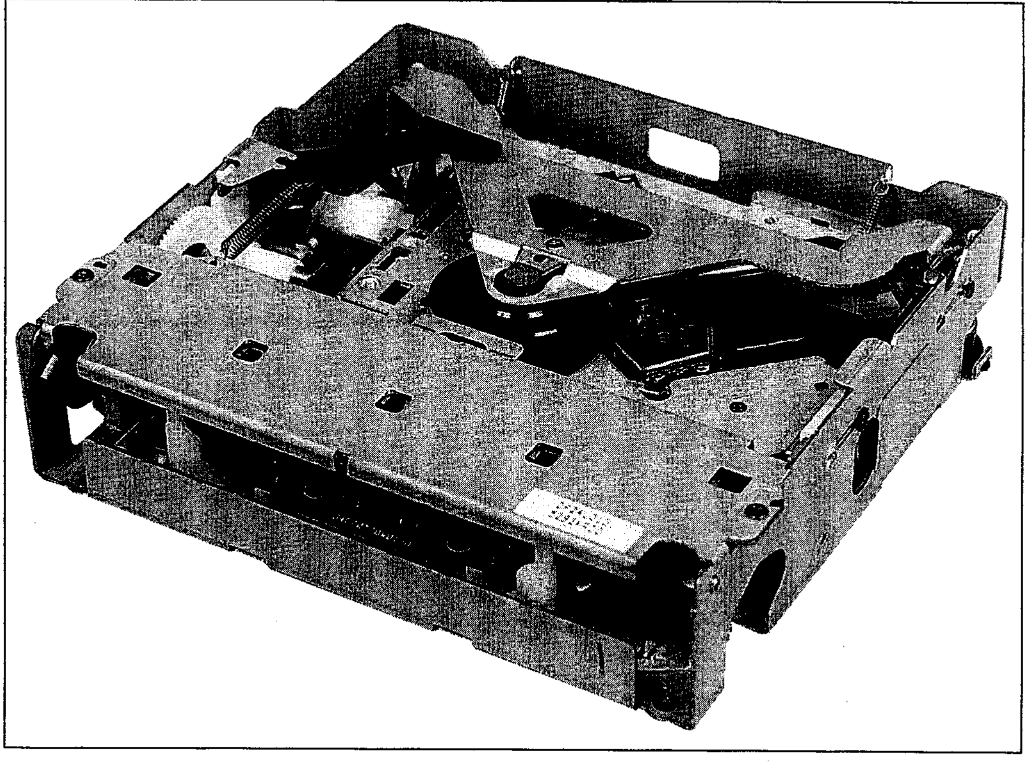
ALPINE®

SERVICE MANUAL

CD Player Mechanism

ADDENDUM & REVISED (II)

- This manual is described on DP24L140/150/240/250/260 only. The DP24L140/150/240/250/260 is developed from DP24L010. For information that is not mentioned in this service manual, refer to the Service Manual • DP-L SERIES (68E23246S01). V8005
- 当マニュアルはDP24L140/150/240/250/260についてのみ記載しております。又、DP24L010がベースモデルとなっておりますので、相違部分のみ記載しております。詳細についてはDP-L SERIES (68E23246S01) を参照願います。



DP-L SERIES

Contents

CD Mechanism Assembly Parts List (Only Difference) .... 3 to 6
Exploded View (CD Mechanism) .... 7 to 8

Mechanism Function Description
Component Disassembly and Assembly Notes

Refer to the Service Manual for DP-L Series (Part No. 68E23246S01).

CD Mechanism Assembly Parts List

NOTE : For the parts not mentioned, refer to the Service Manual for DP-L SERIES (Part No. 68E23246S01).

Model		DP24L010			DP24L140/150/240/250/260		
Symbol	No.	Index	Part No.	Description	Index	Part No.	Description
△	2	5-G	01B70635W01	Assy., Rivet. Arm - Disc	5-G	01B00578K01	Assy., Rivet. Arm Disc - Giude
▲	2	5-G	01B70635W01	Assy., Rivet. Arm - Disc	5-G	01B00578K01	Assy., Rivet. Arm Disc - Giude
□	2	5-G	01B70635W01	Assy., Rivet. Arm - Disc	5-G	01B00578K01	Assy., Rivet. Arm Disc - Giude
△	10	5-B	27C70602W01	Chassis, Top	5-B	27C00576K01	Chassis, Top
▲	10	5-B	27C70602W01	Chassis, Top	5-B	27C00576K01	Chassis, Top
□	10	5-B	27C70602W01	Chassis, Top	5-B	27C00576K01	Chassis, Top
△	13	3-D	01A70636W01	Assy., Rivet. Bracket Motor	3-D	01A00579K01	Assy., Rivet. Bracket Motor
▲	13	3-D	01A70636W01	Assy., Rivet. Bracket Motor	3-D	01A00579K01	Assy., Rivet. Bracket Motor
□	13	3-D	01A70636W01	Assy., Rivet. Bracket Motor	3-D	01A00579K01	Assy., Rivet. Bracket Motor
△	16	3-D	45B70624W01	Arm, Lock (L)	3-D	45B70624W10	Arm, Lock (L)
▲	16	3-D	45B70624W01	Arm, Lock (L)	3-D	45B70624W10	Arm, Lock (L)
□	16	3-D	45B70624W01	Arm, Lock (L)	3-D	45B70624W10	Arm, Lock (L)
△	19	2-B	01A70580W01	Assy., Chassis Pick - Up	2-B	01A00588K01	Assy., Rivet. Chassis Pick-Up
▲	19	2-B	01A70580W01	Assy., Chassis Pick - Up	2-B	01A00588K01	Assy., Rivet. Chassis Pick-Up
□	19	2-B	01A70580W01	Assy., Chassis Pick - Up	2-B	01A00588K01	Assy., Rivet. Chassis Pick-Up
△	26	2-C	41A70587W01	Spring, Multi	2-C	41A70587W10	Spring, Multi
▲	26	2-C	41A70587W01	Spring, Multi	2-C	41A70587W10	Spring, Multi
□	26	2-C	41A70587W01	Spring, Multi	2-C	41A70587W10	Spring, Multi
△	30	1-D	41A70586W01	Spring, Nut (A)	1-C	41A70586W10	Spring, Nut (A)
▲	30	1-D	41A70586W01	Spring, Nut (A)	1-C	41A70586W10	Spring, Nut (A)
□	30	1-D	41A70586W01	Spring, Nut (A)	1-C	41A70586W10	Spring, Nut (A)
△	35	3-A	07A70588W01	Stopper, Clamp	3-A	07A00568K01	Stopper, Clamp
▲	35	3-A	07A70588W01	Stopper, Clamp	3-A	07A00568K01	Stopper, Clamp
□	35	3-A	07A70588W01	Stopper, Clamp	3-A	07A00568K01	Stopper, Clamp
△	43	3-E	45A70629W01	Lever, Switch	3-E	45A70629W10	Lever, Switch
▲	43	3-E	45A70629W01	Lever, Switch	3-E	45A70629W10	Lever, Switch
□	43	3-E	45A70629W01	Lever, Switch	3-E	45A70629W10	Lever, Switch
△	46	4-E	45B70619W01	Lever, Cam	4-E	45B70619W10	Lever, Cam
▲	46	4-E	45B70619W01	Lever, Cam	4-E	45B70619W10	Lever, Cam
□	46	4-E	45B70619W01	Lever, Cam	4-E	45B70619W10	Lever, Cam
△	51	4-E	07A70633W01	Bracket, Motor - Wire	4-E	07A70633W10	Bracket, Motor - Wire
▲	51	4-E	07A70633W01	Bracket, Motor - Wire	4-E	07A70633W10	Bracket, Motor - Wire
□	51	4-E	07A70633W01	Bracket, Motor - Wire	4-E	07A70633W10	Bracket, Motor - Wire
△	52	4-E	01A70637W01	Assy., Rivet. Arm Timing	4-E	01A00593K01	Assy., Rivet. Arm Timing
▲	52	4-E	01A70637W01	Assy., Rivet. Arm Timing	4-E	01A00593K01	Assy., Rivet. Arm Timing
□	52	4-E	01A70637W01	Assy., Rivet. Arm Timing	4-E	01A00593K01	Assy., Rivet. Arm Timing
△	53	4-F	41A70606W01	Spring, Washer	4-F	41A70606W10	Spring, Washer
▲	53	4-F	41A70606W01	Spring, Washer	4-F	41A70606W10	Spring, Washer
□	53	4-F	41A70606W01	Spring, Washer	4-F	41A70606W10	Spring, Washer
○	61	2-G	03S38013W22	Screw, Pan (M2 × 4)	2-G	03S38013W25	Screw, Bind (M2 × 4)
●	61	2-G	03S38013W22	Screw, Pan (M2 × 4)	2-G	03S38013W25	Screw, Bind (M2 × 4)
△	61	2-G	03S38013W22	Screw, Pan (M2 × 4)	2-G	03S38013W25	Screw, Bind (M2 × 4)
▲	61	2-G	03S38013W22	Screw, Pan (M2 × 4)	2-G	03S38013W25	Screw, Bind (M2 × 4)
□	61	2-G	03S38013W22	Screw, Pan (M2 × 4)	2-G	03S38013W30	Screw, Pan (M2 × 4)

NOTE : ○: For DP24L140 Model Only, ●: For DP24L150 Model Only, △: For DP24L240 Model Only, ▲: For DP24L250 Model Only, □: For DP24L260 Model Only, Others : Common.

Model		DP24L010			DP24L140/150/240/250/260		
Symbol	No.	Index	Part No.	Description	Index	Part No.	Description
△	62	2-F	45B70623W01	Arm, Lock (R)	2-F	45B70623W10	Arm, Lock (R)
▲	62	2-F	45B70623W01	Arm, Lock (R)	2-F	45B70623W10	Arm, Lock (R)
□	62	2-F	45B70623W01	Arm, Lock (R)	2-F	45B70623W10	Arm, Lock (R)
○	67		—	—	2-G	26A91588W01	Shield, Cover
△	67		—	—	2-G	26A91588W10	Shield, Cover
□	67		—	—	2-G	26A91588W10	Shield, Cover
○	68		—	—	2-G	14S81641W56	Insulator, Shield Cover
△	68		—	—	2-G	14S81641W56	Insulator, Shield Cover
□	68		—	—	2-G	14S81641W56	Insulator, Shield Cover
○	69		—	—	2-G	03S44205G30	Screw, Pan (M2.6×4)
△	69		—	—	2-G	03S44205G30	Screw, Pan (M2.6×4)
□	69		—	—	2-G	03S44205G30	Screw, Pan (M2.6×4)
Miscellaneous							
△	M1303	3-C	01V73300W38	Assy., Motor Sled (7V-370mA)	3-C	01V11100Y98	Assy., Motor Sled (7V-370mA)
▲	M1303	3-C	01V73300W38	Assy., Motor Sled (7V-370mA)	3-C	01V11100Y98	Assy., Motor Sled (7V-370mA)
□	M1303	3-C	01V73300W38	Assy., Motor Sled (7V-370mA)	3-C	01V11100Y98	Assy., Motor Sled (7V-370mA)

NOTE: ○: For DP24L140 Model Only, ●: For DP24L150 Model Only, △: For DP24L240 Model Only,
▲: For DP24L250 Model Only, □: For DP24L260 Model Only, Others: Common.

CDメカニズム関係部品表

※ 記載されていない部品については、サービスマニュアル・
DP-L SERIES (68E23246S01) を参照願います。

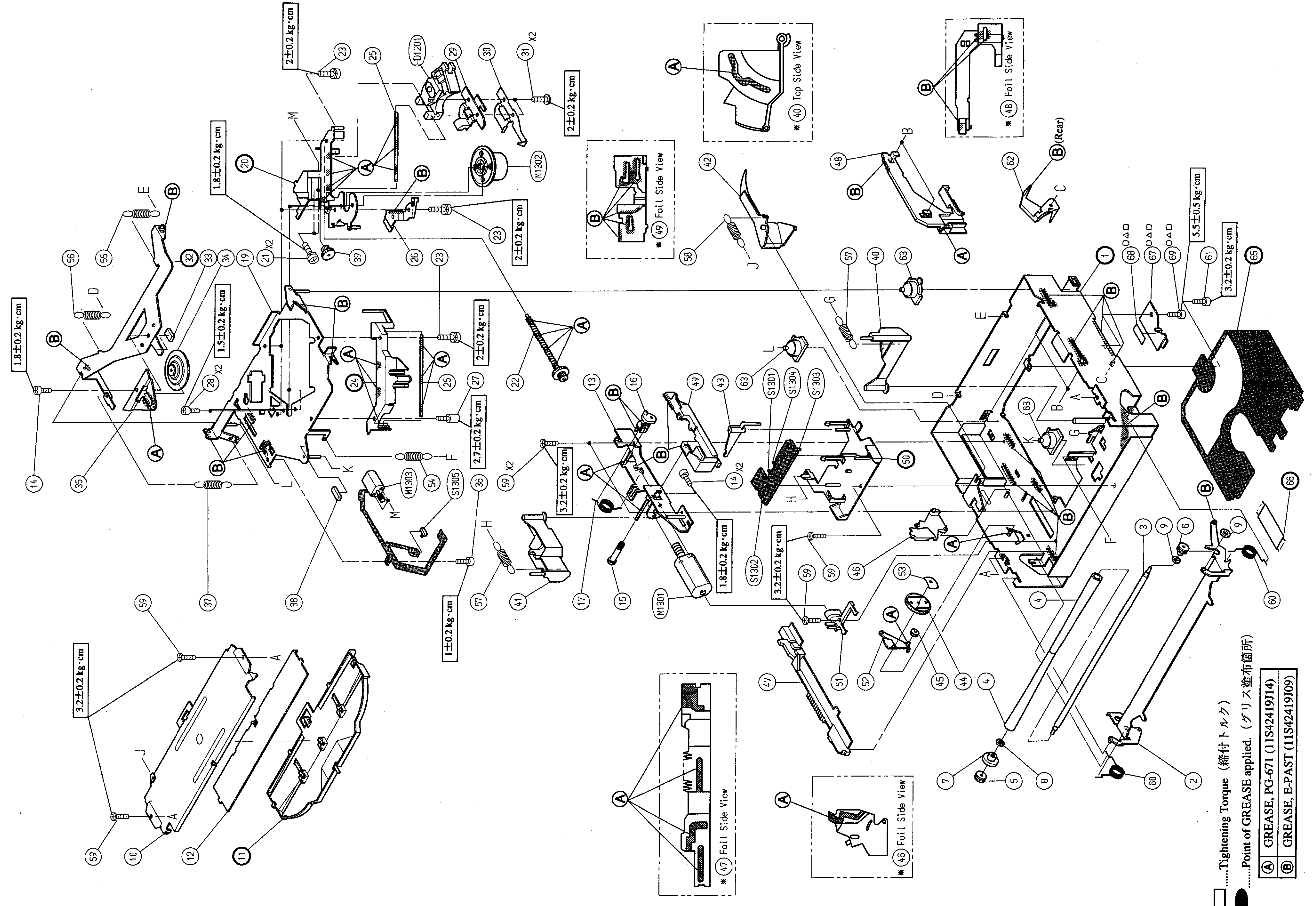
Model		DP24L010				DP24L140/150/240/250/260			
記号		索引	部品番号	部品名	標準卸価格	索引	部品番号	部品名	標準卸価格
△	2	5-G	01B70635W01	Assy., Rivet. Arm - Disc	350	5-G	01B00578K01	Assy., Rivet. Arm Disc - Giude	—
▲	2	5-G	01B70635W01	Assy., Rivet. Arm - Disc	350	5-G	01B00578K01	Assy., Rivet. Arm Disc - Giude	—
□	2	5-G	01B70635W01	Assy., Rivet. Arm - Disc	350	5-G	01B00578K01	Assy., Rivet. Arm Disc - Giude	—
△	10	5-B	27C70602W01	Chassis, Top	280	5-B	27C00576K01	Chassis, Top	—
▲	10	5-B	27C70602W01	Chassis, Top	280	5-B	27C00576K01	Chassis, Top	—
□	10	5-B	27C70602W01	Chassis, Top	280	5-B	27C00576K01	Chassis, Top	—
△	13	3-D	01A70636W01	Assy., Rivet. Bracket Motor	400	3-D	01A00579K01	Assy., Rivet. Bracket Motor	—
▲	13	3-D	01A70636W01	Assy., Rivet. Bracket Motor	400	3-D	01A00579K01	Assy., Rivet. Bracket Motor	—
□	13	3-D	01A70636W01	Assy., Rivet. Bracket Motor	400	3-D	01A00579K01	Assy., Rivet. Bracket Motor	—
△	16	3-D	45B70624W01	Arm, Lock (L)	80	3-D	45B70624W10	Arm, Lock (L)	80
▲	16	3-D	45B70624W01	Arm, Lock (L)	80	3-D	45B70624W10	Arm, Lock (L)	80
□	16	3-D	45B70624W01	Arm, Lock (L)	80	3-D	45B70624W10	Arm, Lock (L)	80
△	19	2-B	01A70580W01	Assy., Chassis Pick-Up	730	2-B	01A00588K01	Assy., Rivet. Chassis Pick-Up	—
▲	19	2-B	01A70580W01	Assy., Chassis Pick-Up	730	2-B	01A00588K01	Assy., Rivet. Chassis Pick-Up	—
□	19	2-B	01A70580W01	Assy., Chassis Pick-Up	730	2-B	01A00588K01	Assy., Rivet. Chassis Pick-Up	—
△	26	2-C	41A70587W01	Spring, Multi	220	2-C	41A70587W10	Spring, Multi	220
▲	26	2-C	41A70587W01	Spring, Multi	220	2-C	41A70587W10	Spring, Multi	220
□	26	2-C	41A70587W01	Spring, Multi	220	2-C	41A70587W10	Spring, Multi	220
△	30	1-D	41A70586W01	Spring, Nut (A)	100	1-C	41A70586W10	Spring, Nut (A)	100
▲	30	1-D	41A70586W01	Spring, Nut (A)	100	1-C	41A70586W10	Spring, Nut (A)	100
□	30	1-D	41A70586W01	Spring, Nut (A)	100	1-C	41A70586W10	Spring, Nut (A)	100
△	35	3-A	07A70588W01	Stopper, Clamp	60	3-A	07A00568K01	Stopper, Clamp	—
▲	35	3-A	07A70588W01	Stopper, Clamp	60	3-A	07A00568K01	Stopper, Clamp	—
□	35	3-A	07A70588W01	Stopper, Clamp	60	3-A	07A00568K01	Stopper, Clamp	—
△	43	3-E	45A70629W01	Lever, Switch	70	3-E	45A70629W10	Lever, Switch	45
▲	43	3-E	45A70629W01	Lever, Switch	70	3-E	45A70629W10	Lever, Switch	45
□	43	3-E	45A70629W01	Lever, Switch	70	3-E	45A70629W10	Lever, Switch	45
△	46	4-E	45B70619W01	Lever, Cam	80	4-E	45B70619W10	Lever, Cam	45
▲	46	4-E	45B70619W01	Lever, Cam	80	4-E	45B70619W10	Lever, Cam	45
□	46	4-E	45B70619W01	Lever, Cam	80	4-E	45B70619W10	Lever, Cam	45
△	51	4-E	07A70633W01	Bracket, Motor - Wire	70	4-E	07A70633W10	Bracket, Motor - Wire	70
▲	51	4-E	07A70633W01	Bracket, Motor - Wire	70	4-E	07A70633W10	Bracket, Motor - Wire	70
□	51	4-E	07A70633W01	Bracket, Motor - Wire	70	4-E	07A70633W10	Bracket, Motor - Wire	70
△	52	4-E	01A70637W01	Assy., Rivet. Arm Timing	140	4-E	01A00593K01	Assy., Rivet. Arm Timing	—
▲	52	4-E	01A70637W01	Assy., Rivet. Arm Timing	140	4-E	01A00593K01	Assy., Rivet. Arm Timing	—
□	52	4-E	01A70637W01	Assy., Rivet. Arm Timing	140	4-E	01A00593K01	Assy., Rivet. Arm Timing	—
△	53	4-F	41A70606W01	Spring, Washer	60	4-F	41A70606W10	Spring, Washer	60
▲	53	4-F	41A70606W01	Spring, Washer	60	4-F	41A70606W10	Spring, Washer	60
□	53	4-F	41A70606W01	Spring, Washer	60	4-F	41A70606W10	Spring, Washer	60
○	61	2-G	03S38013W22	Screw, Pan (M2×4)	45	2-G	03S38013W25	Screw, Bind (M2×4)	45
●	61	2-G	03S38013W22	Screw, Pan (M2×4)	45	2-G	03S38013W25	Screw, Bind (M2×4)	45
△	61	2-G	03S38013W22	Screw, Pan (M2×4)	45	2-G	03S38013W25	Screw, Bind (M2×4)	45
▲	61	2-G	03S38013W22	Screw, Pan (M2×4)	45	2-G	03S38013W25	Screw, Bind (M2×4)	45
□	61	2-G	03S38013W22	Screw, Pan (M2×4)	45	2-G	03S38013W30	Screw, Pan (M2×4)	45

注記：○：DP24L140 モデル専用, ●：DP24L150 モデル専用, △：DP24L240 モデル専用,
▲：DP24L250 モデル専用, □：DP24L260 モデル専用, その他：共通

Model		DP24L010				DP24L140/150/240/250/260			
記号		索引	部品番号	部品名	標準卸価格	索引	部品番号	部品名	標準卸価格
△	62	2-F	45B70623W01	Arm, Lock (R)	60	2-F	45B70623W10	Arm, Lock (R)	70
▲	62	2-F	45B70623W01	Arm, Lock (R)	60	2-F	45B70623W10	Arm, Lock (R)	70
□	62	2-F	45B70623W01	Arm, Lock (R)	60	2-F	45B70623W10	Arm, Lock (R)	70
○	67		—	—	—	2-G	26A91588W01	Shield, Cover	90
△	67		—	—	—	2-G	26A91588W10	Shield, Cover	90
□	67		—	—	—	2-G	26A91588W10	Shield, Cover	90
○	68		—	—	—	2-G	14S81641W56	Insulator, Shield Cover	45
△	68		—	—	—	2-G	14S81641W56	Insulator, Shield Cover	45
□	68		—	—	—	2-G	14S81641W56	Insulator, Shield Cover	45
○	69		—	—	—	2-G	03S44205G30	Screw, Pan (M2.6×4)	45
△	69		—	—	—	2-G	03S44205G30	Screw, Pan (M2.6×4)	45
□	69		—	—	—	2-G	03S44205G30	Screw, Pan (M2.6×4)	45
Miscellaneous									
△	M1303	3-C	01V73300W38	Assy., Motor Sled (7V-370mA)	1,770	3-C	01V11100Y98	Assy., Motor Sled (7V-370mA)	—
▲	M1303	3-C	01V73300W38	Assy., Motor Sled (7V-370mA)	1,770	3-C	01V11100Y98	Assy., Motor Sled (7V-370mA)	—
□	M1303	3-C	01V73300W38	Assy., Motor Sled (7V-370mA)	1,770	3-C	01V11100Y98	Assy., Motor Sled (7V-370mA)	—

注記：○：DP24L140 モデル専用, ●：DP24L150 モデル専用, △：DP24L240 モデル専用,
▲：DP24L250 モデル専用, □：DP24L260 モデル専用, その他：共通

Exploded View (CD Mechanism)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5.5±0.5 kg·cm
X2
D1201
M1302
M1303
M1301
S1305
S1301
S1304
S1303
S1302
Ⓐ
Ⓑ
Ⓑ(Rear)
✱ ㊵ Top Side View
✱ ㊽ Foil Side View
✱ ㊾ Foil Side View
✱ ㊼ Foil Side View
✱ ㊻ Foil Side View
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 65 66 67 68 69
A B C D E F G H J K M

▭ ......Tightening Torque （締付トルク）

● ......Point of GREASE applied. （グリス塗布箇所）

Ⓐ	GREASE, PG-671 (11S42419J14)
Ⓑ	GREASE, E-PAST (11S42419J09)

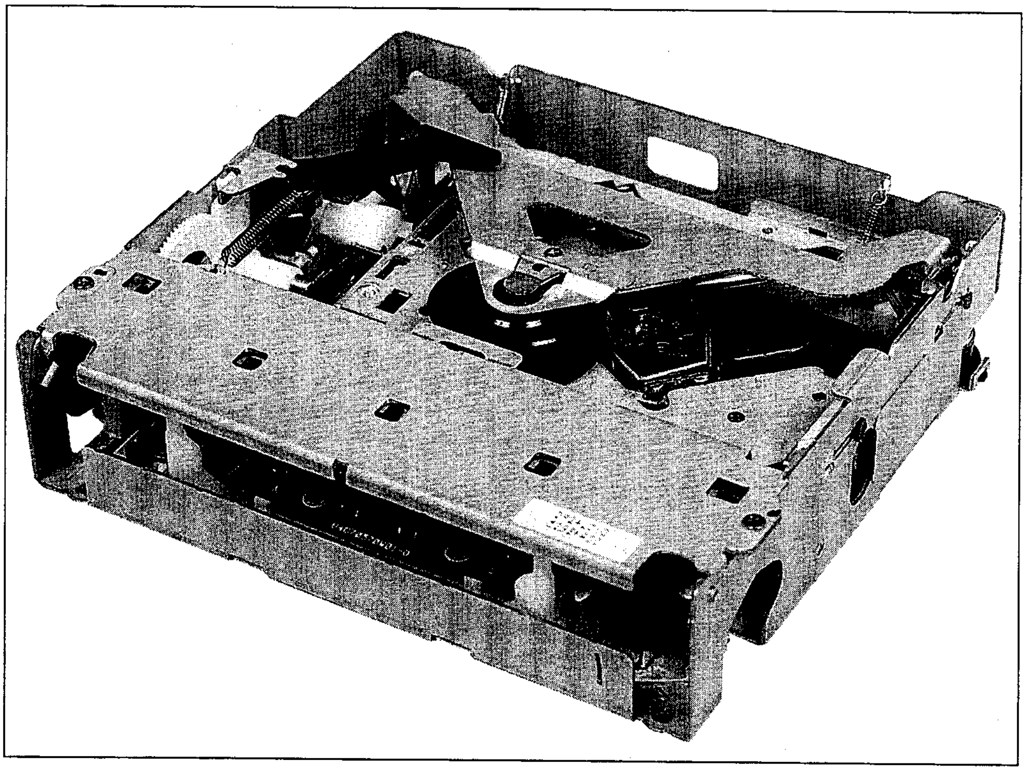
ALPINE

SERVICE MANUAL

CD Player Mechanism

ADDENDUM & REVISED (III)

- This manual is described on DP23L05A/DP24L05A only. The DP23L05A/DP24L05A is developed from DP23L010. For information that is not mentioned in this service manual, refer to the Service Manual • DP-L SERIES (68E24872S01).
- 当マニュアルはDP23L05A/DP24L05Aについてのみ記載しております。又、DP23L010がベースモデルとなっておりますので、相違部分のみ記載しております。詳細についてはDP-L SERIES (68E24872S01) を参照願います。



DP-L SERIES

Contents

CD Mechanism Assembly Parts List (Only Difference) 2
Exploded View (CD Mechanism) .... 3 to 4

Mechanism Function Description
Component Disassembly and Assembly Notes

Refer to the Service Manual for DP-L Series (Part No. 68E23246S01).

Cabinet Assembly Parts List

NOTE : For the parts not mentioned, refer to the Service Manual for DP-L SERIES (Part No. 68E24872S01).

Model	DP-L SERIES				DP23L05A/DP24L05A		
Symbol No.	Index	Part No.	Description		Index	Part No.	Description
67		——	——		4-B	75A10573Y01	Sheet, Guide Top
68		——	——		4-C	75A10573Y02	Sheet, Guide Top
69		——	——		2-B	75A10573Y03	Sheet, Guide Top
Miscellaneous							
HD1201	1-C	81B81296W01	Pick-Up Unit	○	1-C	81B81296W02	Pick-Up Unit
or	1-C	——	——	○	1-C	81B10890Y01	Pick-Up Unit
HD1201	1-C	81B81296W01	Pick-Up Unit	●	1-C	88T55261W01	Pick-Up Unit
M1302	2-D	01V94200W03	Assy., Motor Spindle (3V-90mA)		2-D	01V73300W35	Assy., Motor Spindle (2V-90mA)

NOTE: ○: For DP23L05A Model Only, ●: For DP24L05A Model Only, Others : Common.

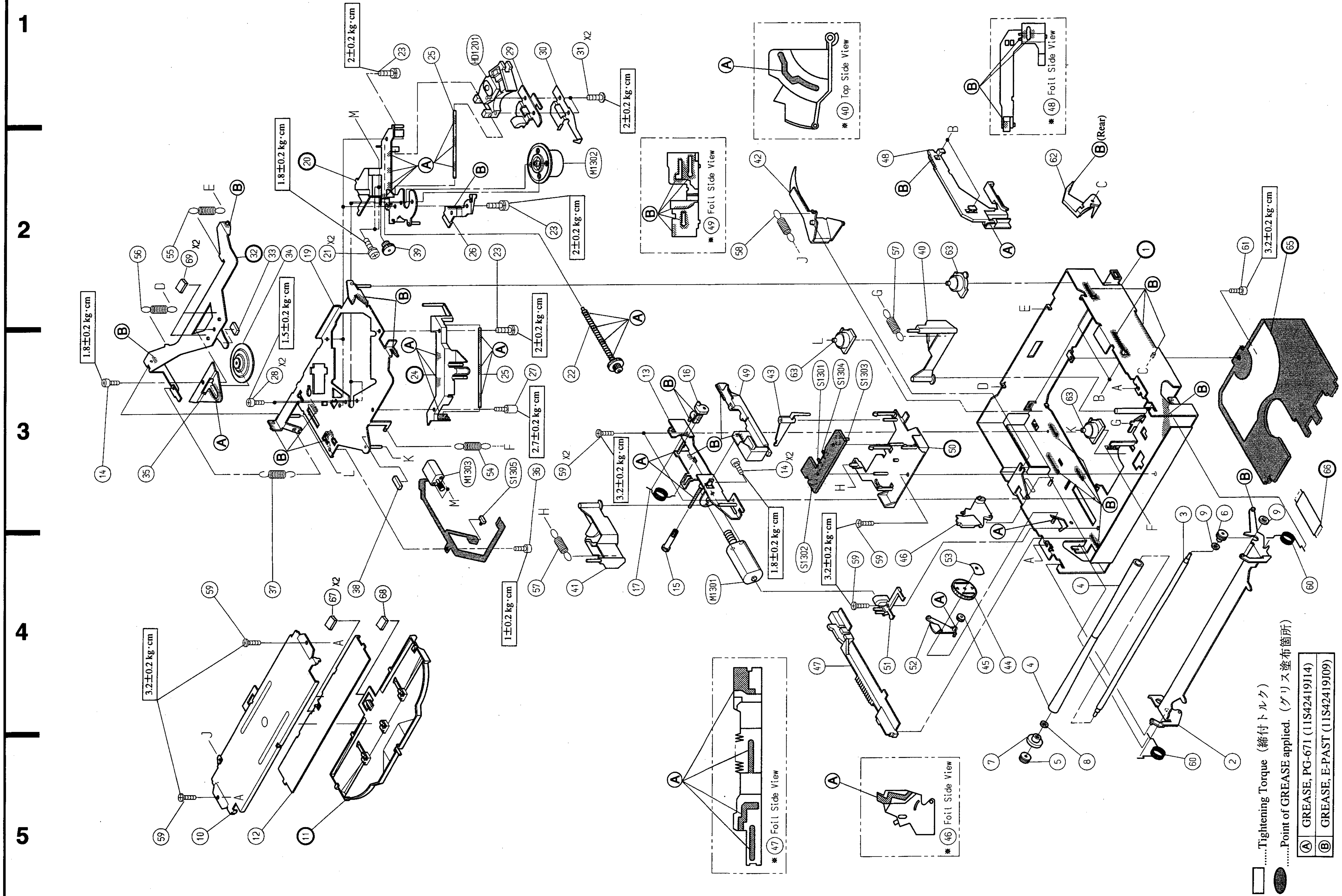
キャビネット関係部品相違表

※ 記載されていない部品については、サービスマニュアル・DP-L SERIES (Part No. 68E24872S01) を参照願います。

Model	DP-L SERIES					DP23L05A/DP24L05A			
記号	索引	部品番号	部品名	標準卸価格		索引	部品番号	部品名	標準卸価格
67		——	——	——		4-B	75A10573Y01	Sheet, Guide Top	45
68		——	——	——		4-C	75A10573Y02	Sheet, Guide Top	45
69		——	——	——		2-B	75A10573Y03	Sheet, Guide Top	45
その他の電気部品									
HD1201	1-C	81B81296W01	Pick-Up Unit	3,350	○	1-C	81B81296W02	Pick-Up Unit	——
or	1-C	——	——	——	○	1-C	81B10890Y01	Pick-Up Unit	——
HD1201	1-C	81B81296W01	Pick-Up Unit	3,350	●	1-C	88T55261W01	Pick-Up Unit	3,350
M1302	2-D	01V94200W03	Assy., Motor Spindle (3V-90mA)	1,530		2-D	01V73300W35	Assy., Motor Spindle (3V-90mA)	1,440

注記：○：DP23L05A モデル専用, ●：DP24L05A モデル専用, その他：共通

Exploded View (CD Mechanism)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1±0.2 kg·cm
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(61) (62) (63) (65) (66) (67) (68) (69)
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HD1201
M1301
M1302
M1303
S1301
S1302
S1303
S1304
S1305
Ⓐ
Ⓑ
Ⓑ(Rear)
✱ ㊵ Top Side View
✱ ㊽ Foil Side View
✱ ㊾ Foil Side View
✱ ㊼ Foil Side View
✱ ㊻ Foil Side View
A
B
C
D
E
F
G
H
J
K
L
M

□ ......Tightening Torque （締付トルク）

● ......Point of GREASE applied. （グリス塗布箇所）

Ⓐ	GREASE, PG-671 (11S42419J14)
Ⓑ	GREASE, E-PAST (11S42419J09)